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ORIGINAL ARTICLES.

THE MICROSCOPE IS NOT A TOY, BUT A USEFUL MEANS TO GYNECOLOGICAL ENDS.

Read before the Gynecological Society of Boston, March 10, 1892.

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It shows one cause of neurosis and fetid urine in women.

Case 1.—Some years ago, a lady patient complained of the offensive odor of her urine when voided. She said it smelt like "bilge water."

On examination the urine was found to be of good specific gravity, slightly mahogany colored, no deposit on cooling, no albumin, no morphological element at first found. The odor was, as she said, a strong smell of tannic acid as in newly tanned sole leather.

I did not give up, but carefully noting this and other experiments with the microscope I found bacteria in considerable quantity, in the freshly voided urine. They were segregate, globular, and not auto-mobile. I regarded them as the babies of a fungus vegetation, corresponding to the bacilli or babies of the butyric acid fermentation vegetation found in rancid butter which in baby stage of development multiply and by the life chemical actions of their protoplasm develop the rancid smell and taste, just as the gases of putrefaction are developed by the bacteria and mycelial filaments of the putrefactive vegetations.

It occurred to me to lay down the principle for myself, that no bacterial nor mycelial vegetations were normally present in the urine while it is inside the bladder, and that the smell complained of was due to the presence of this very vegetation, whose name I was not acquainted with. Nor did I think it necessary to wait for the name before action to remove, any more than one would stop to ask the name of a burglar caught in his house at midnight stealing, before he was arrested or driven off.

By treatment the vegetation was removed, and the bad smell went with it. Hence I have concluded my reasoning was correct.

Treatment.—This case was treated on the principle that if nature is well sustained she will clear out any such abnormal vegetation. In other words vegetable parasites will not live in a perfectly healthy body, any more than the fungus which causes peach tree blight will grow unless the tree has been weakened by the losing of a certain amount of its normal mineral food, as Prof. Goessmann, of Massachusetts Agricultural College, told me.

Now, as I had known from experience that beef was an article of food which requires the minimum of nerve force to digest, and when digested would sustain human life in normality indefinitely (I have not the time to give the reasons, nor do I need to, as this is merely a esoteric history), I put her on beef alone, and in a short time the bad smell disappeared and along with it the bacteria aforesaid. No medicine.

Remarks.—This may be called general treatment. It should never be forgotten that after all it is nature that cures. In husbandry it is nature that raises the crop. For the farmer may plow, plant, and cultivate in vain, unless nature does her work. Paul said "I have planted, and Apollos watered, but God gave the increase." Nature will cure almost any disease if she has a fair chance.

Case 2.—A middle aged lady made great complaint of fetid urine as it was voided. (If it becomes fetid on standing it is not so much of a medical matter, though perfectly healthy urine is not apt to become fetid, unless kept in a very warm place.)

Along with this she had great distress of the bladder; hyperæsthesia of the urethra and vagina, with a completely anteverted uterus bound down by adhesions.

This case has had a singular history to which I will refer briefly:

She had been a patient of Drs. H. R. Storer and Warner, in their private hospital in Somerville, and was operated on by them for stricture of the rectum in 1870.

In 1872, she was operated on by Dr. A. S. Woodward [1] of Brandon, Vermont, who removed the entire coccyx,[2] which had been broken by a severe fall years before. In 1876, she was operated on by Dr. Charles L. Allen[3] (now dead), professor of "Theory and Practice," University of Vermont, by dilating the urethra and carrying fingers into the bladder, finding ulceration, which he relieved by injections of nitrate of silver solution. In 1880, she was operated on again by Dr. Allen for stricture which had entirely closed the rectum nearly four inches for a week; all which helped to explain the neurasthenic suffering. I examined her blood for rheumatism (as she had had it before) with the microscope, and found none. The chemical examination of the urine shed no light, but a microscopical inquiry as to the fetor of the urine at once showed a bacterial or microbal vegetation made up *not* like that of case 1, with globular spores alone, but of several globular spores joined side by side, so as to make rods or bacilli which were very numerous, auto-mobile and active. The microscope, and the microscope alone revealed to me the true situation. Here was a case with anteverted uterus, with the coccyx removed, with the rectum torn open twice and seared with a hot iron, the urethra dilated, and the bladder treated as above, who could live in comparative comfort, but who by the addition of the intra-vesical

[1] Prof. "Diseases of Women and Children," University Burlington, Vermont.
[2] At that time, said to be the fifth case on record in the world.
[3] Of Rutland, Vermont.

cryptogamic vegetation was rendered almost frantic with suffering.

In addition to the suffering and the fetor, she complained of having a "wooden bladder." All natural motion of the organ had ceased except when stimulated by powerful diuretics, and she could not empty the bladder without supra pubic manual pressure. She had called the attention of her physician to these symptoms. He examined the urine with a microscope (so he told her) and said there was nothing the matter with the urine. The odor was due to the condition of the blood, which he did not examine.

Doubtless I should have done no better than her medical attendant, had I not since 1853, been almost constantly studying the urine in disease, and have learned much more than I knew when I first began. Nor should I now write this communication except that the lady in question insisted it "was my duty to suffering humanity" to tell what I knew about such cases.

The treatment in this case was general and local.

General Treatment.—This patient had for sixteen years lived principally on a milk diet, prescribed by Dr. Allen, of which diet she was very fond. I could not bring her down to beef alone, it distressed her and made her sick at the stomach, but I got her down *towards* it. I told her she could not expect to "cast out Satan," if she continued to let him in through bad food.

Local Treatment was by injecting the bladder with a warm, saturated, watery solution of benzoate of soda once in two days.[4] The fountain syringe was employed. Such was the extreme hyperæsthesia of the urethra, that it was positive agony to introduce the catheter for injection. The subsequent suffering was also very great.

Still, the effect on the vegetation was prompt and decisive. The auto-mobile protoplasmic motions of the bacteria ceased. After the second injection, their number was greatly diminished. The relief was great. After the third injection, some of the parent mycelial filaments were found. Evidently the "old settlers" were being rooted out. I suppose the vegetations nested in the folds of the contracted bladder, ready to go forth when the field was clear. Indeed, from the chronic nature of the case, I expect it will take some time to kill off the whole brood.

But there is so much relief from what has been done, that I feel assured she will be entirely relieved of these vegetations which, superadded to her old troubles, have made her life one of misery and torment the past few months.

Thanks to the use of an instrument which is regarded as a toy, or as my "hobby," or to be kept at a drug store, and a very poor one at that.

Remarks on the Nature of this Vegetation.—Some time ago, in *Gaillard's Medical Journal*, I published an account of lactic acid vinegar, lactic acid alcohol, and lactic acid mycelial filaments which loaded the urine and sputum of a patient who had lived on milk, and taken lactic acid as a medicine. Since that time, an oxalate of lime calculus was removed from his bladder. It is possible that a stone is in the bladder of the present case. But as she has a history of a milk diet, it is probable her vegetation is lactic acid in the bacterial stage. This is for one who knows more than I do to decide. But the case is viewed from the standpoint of a gynecist, not a technical botanist. If a foreign body gets into the eye, surgeons do not wait for an accurate description before removal, though it would be desirable.

This case is under treatment which, but for the microscope, would not be understood.

Case 3.—That noble man, Dr. Wheeler, of Chelsea, Mass., called my attention some years ago to a case of catalepsy, a lady 72 years old, which needed more study than the medical gentlemen who had seen her could give—adding some encouraging and stimulating words, that made me put my wits to work at once.

It seems she referred the seat of her trouble to the pelvis, saying that when "she had fits," there seemed to be something streaming up in her abdomen from just above the pubis, that would go all over her, and then she would be in the midst of her catalepsy. Her blood was normal. I supposed the case was due to uterine trouble. On examination, I found a rarity. The uterus, in size and position, was normal. The speculum revealed an almost virgin os; the vagina was normal. There were no tumors found. Abdomen was normal. As it is a rule with me to examine urine of patients under the microscope, I did so here. Another surprise. I found the freshly voided urine filled with:

1. Large, beautiful and graceful skeins of mycelial filaments.

2. Bacteria in large abundance and very actively swarming.

There was no other abnormality that I could find.

In the order of time this case occurred before cases 1 and 2. I spent some time in admiring the beauty of the vegetations, and then it came to me to lay down for myself the principle above stated, that such a vegetation, so fully developed, had no normal place in the bladder, and that, in the absence of other known causes, it was wise to conclude that this profuse abnormal vegetation was the cause of the catalepsy, from the irritation it caused to the central nervous system—analogous to a person wanting to pass water all the time. This, kept up for a long time, as it had been, seemed to be the exciting factor of the neurosis.

Acting on this principle, I injected a teacupful of a warm, saturated, watery solution of benzoate of soda and salicylate of soda, equal parts. I taught her daughter to do this three times a week. I think I saw her once or twice only. But Dr. Wheeler reported to me that she never had another neurotic symptom after the first application, but died of some other complaint a year or two later.

Remarks.—Perhaps some one may ask, Have you found in newly voided urine these vegetations without the neurosis? Answer. I have. Case 1 had no neurosis—but I have no doubt, had it been allowed to run on, it might. If the constitution is strong enough to bear it, no neurosis may occur. People have the gravel of the blood latent in rheumatism without a rheumatic attack, until a cold brings it out; or gravel of the lungs latent and no asthma or hay fever, until some exciting cause brings it on. Or, to use another simile, a gun does not go off, even though loaded, unless fired. How often have guns, said to be *not* loaded, gone off and killed people from the hands of those who are in sport. The load is the predisposing cause of the explosion of the gun, and the pulling of the trigger is the exciting cause.

My old teacher, Prof. Hodge, of pessary fame, used

[4] It was allowed to remain as long as it could be retained—three hours in one instance.

to tell of a Philadelphia market-woman who did business for years, and slept in her market wagon summer and winter at night, on Market Street. Yet her uterus, all this time, was completely prolapsed down between her knees, and she said she suffered none from it! So it may be that these vesical vegetations are not always the cause of neurotic trouble, but to get rid of fetid urine in the bladder, unless there is stone or some organic disease, or dirty catheter, in my opinion you must get rid of the vegetations which produce it, and can be surely diagnosticated only by the use of the microscope, not as a toy, but as an instrument of precision of positive gynecological value, not to be despised nor counted out.

Postlude.—In Case 2 there was a spasmodic condition of the urethra—urethrismus—due to these vegetations, which are sometimes found with stone in the bladder—but there was no evidence of stone in any of these cases. If I can be allowed in this connection the privilege, I would like to hint the desirability of studying the morphology of intravesical urine in all cases of urethrismus, so as to be sure that these vegetations are not overlooked.

Case of Suppressed Menstruation.—January 26, 1892, a large maiden of 25 years, in the midst of menses, took, at midday, a long ride in a dogcart. She was very much chilled and disagreeably shaken up. The menses ceased to flow. At night she was very much oppressed in breathing, and in a good deal of stomachic distress. About midnight she vomited blood largely. As she went to the bath-room the floor was stained with blood. In the bath-room she fainted and fell to the floor. My son, Dr. John A. Cutter, found her in surroundings that looked as if murder had been committed. Though her history was clear, still it was desirable to know that the hæmorrhage was not of a tuberculous complication. Having no microscope with him, he sent for me and a clinical microscope, and I found that while the morphology of the blood was not normal, it was not tuberculous. This made the diagnosis clear. Though the patient was very ill and about moribund, she is now recovered completely.

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GYNIC DISEASES HAVE NOTHING TO DO WITH INSANITY(?)

At a late meeting of the New York State Medical Society, a reader took the above ground strongly. He based it mainly on the statistics of insanity, foreign and domestic, which showed that as many women were insane as men, who had no uteri to get out of order; that if gynic diseases operated to produce insanity, the proportion ought to be larger of alien women to alien men; that hence, it was useless for alienists to become gynecologists as there was no call for their work.

Now, in reply to this, I would like to see some joint expression of our Society based on facts to show its fallacy or not. Some points to be raised are as follows:

1. These statistics were made by those who confessedly knew not about gynecology.

2. Except from outside pressure alienists will not make gynecological examinations nor studies.

3. To insist that there are no gynecological lesions in insane women, because they have not been looked for and thus not found, is to beg the question and amounts to no reason whatever for the position.

4. The writer and others claim that gynecological affections, by the withdrawal of nerve force, virtue or dynamos, do weaken the mind so that some women become insane from this cause as experience has shown.

5. Insane women who have had gynecological diseases cured, have become sane.

6. A physician told a patient of mine that he had studied six months in an insane asylum, where, out of 400 women he found 300 with female diseases, and that in his opinion they would not have been insane if their local troubles had been properly treated at the outset at home.

7. In my opinion lesions of the sexual organs are causes of insanity in men. I have found neurasthenia in men to come from a urinary catarrh of the spermatic ducts. This catarrh is in three forms, I think: 1. Proto-plasmic, like the white of egg. 2. Skeins and filaments more or less marked. 3. Indian club shaped. (For its detection use one inch objectives.) Out of 100 cases at Flushing, L. I., Male Insane Asylum, I found at least eighty who had in their urine one, two or three alone, or combined in sufficient quantity (provided they were fair samples) to produce neurasthenia, which is thus shown to be one cause of insanity. If this is so, may not this catarrh explain why there are as many men as women insane? And from parallel sexual causes, too.

8. An insane woman who had been to an Alienist Asylum for treatment was not even examined gynecologically. She paid her bills. After a considerable time she was discharged as uncured. She was found to have anteversion complete and a hyperæsthetic uterus with 3½ inches depth of cavity. She was treated with iodoform vectors till the hyperæsthesia was removed, and the uterus reduced to normal size. She then wore my stem pessary for a few months and is now entirely cured. She was so grateful to her physician, Dr. Wheeler, of Chelsea, that she wrote and desired to publish a letter of gratitude to him for her complete restoration to health and reason. I saw this case in consultation with Dr. Wheeler, who carried out my plan, and can give if he will, the full particulars.

9. I think the reader, above referred to, should be answered also as he threw ridicule on gynecologists by saying that there was only one time when a man should pass through or be acquainted with the vagina, *to-wit, at birth!* Unless better reasons than these are given, I for one, shall consider the alienists as derelict in their duties to the unfortunate women under their charge.

I know of no other body in the world better entitled to take up the gauntlet thus thrown down than this Society, which was the first in the world to take up especially the study of women's diseases—insanity included.

1730 Broadway, New York, Feb. 8, 1892.

GRADUATES IN MEDICINE, 1892.—Southern Medical College, 34; St. Louis Medical College, 18; St. Louis College of Physicians and Surgeons, 83; Missouri Medical College, 14; Medical Department, University of Tennessee, 101; Medical Department, University of New York, 150; Meharry Medical College, 25; Medical Department, University of Nashville, 150.

DERASSE reports a pregnancy which he recently attended at full term, the woman being in her sixtieth year. Dr. A. O. Barnes, of St. Joseph, ten years ago reported a case in the *Medical Standard* of a woman aged sixty-five who went to full term and was successfully delivered.

A CASE OF LARYNGEAL GROWTH.

BY F. C. RAYNOR, M.D.,
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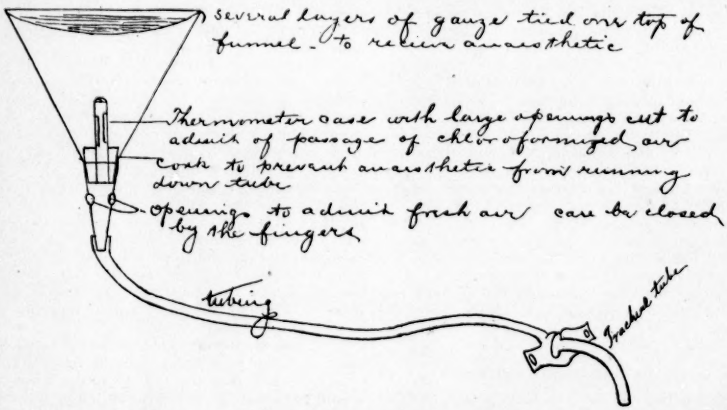
The following history of a case of laryngeal growth presents unusual and interesting features, and I therefore bring it before the Association for consideration:

Ida M. M., age 12, school girl, came under the care of Dr. Sherwell and myself at the Skin and Throat Clinic of the Brooklyn Eye and Ear Hospital, July 18, 1889. She complained of hoarseness, slight hacking cough, and dyspnœa on exertion, which she had first noticed about six months previous. She was small for her age, and somewhat anæmic; her mother died of phthisis, father and two sisters healthy. On laryngoscopical examination was found a papillomatous growth on the top of the right vocal cord, near the anterior commissure. It extended upward into the ventricle, was oblong in shape and had an attachment of about three-eighths by one-fourth inches. It was pale in color, contrasting strongly with the adjacent tissues, which were all congested. She was put on tonics and sedative applications made, and from time to time instruments were passed into the larynx for the purpose of establishing toleration prior to an attempt at removal. Meanwhile the tumor was growing, the voice reduced to a whisper, dyspnœa increasing and the irritability not subsiding, and after having failed with several instruments, including Dr. Sherwell's, which usually answers the purpose admirably, I was forced to make several "snap shots" with Mackenzie's cutting forceps, and succeeded in removing part of the growth, with corresponding relief, and without damaging normal tissues. Cocaine was of no service whatever; the mental condition of the patient seeming to be more at fault than any local hyperæsthesia. The sedative applications were continued and occasional attempt at removal made (sometimes partially successful, oftener not), until the middle of October, when at Dr. Sherwell's suggestion, I began the insufflation of salicylic acid diluted with powdered acacia, in the proportion of one part acid, three parts acacia. Salicylic acid acts so well in reducing epithelial and warty growths on the skin, that it was hoped it might prove equally successful in treating these growths when arising from mucous membrane. The applications were as a rule, well borne, only a slight cough being produced, occasionally a momentary spasm. On November 9, during an application at my office, she choked. I saw at once that this was no ordinary spasm, and surmising that the growth had become impacted in the glottis, by the inspiratory efforts of the patient, I sent post haste for Dr. Sherwell and his tracheotomy instruments. Meanwhile the girl became cyanotic, lost consciousness, efforts at respiration became less and less, while I stood by, knife in hand ready to make an opening in the trachea without formality in case they ceased altogether. Just as she stopped breathing, Dr. Sherwell arrived, and in the shortest possible time a tube was inserted, the patient inverted, artificial respiration performed, and in a few minutes she was breathing naturally; then we finished the operation. Bleeding vessels were ligated, the lips of the wound approximated and a dressing of iodoform gauze applied. Fortunately, Dr. Gildersleeve, who also has an office in the house where mine is located, was in, and he rendered valuable assistance. The family of the patient were notified of what had occurred, and were advised to have her taken to the Brooklyn Hospital for operation, to which they consented, and the patient was accordingly removed. The tracheotomy wound had healed nicely, and on the twentieth thyrotomy was performed, Dr. Sherwell operating, assisted by the house-staff and myself. Anæsthesia was produced by chloroform, administered through the tracheotomy tube. We tried ether at first, but it occasioned so much coughing that it was abandoned. Not being provided with a special tracheal inhaler, I constructed one out of a pint tin funnel, an old thermometer case, a cork, piece of gauze and a yard of drainage tubing, which answered the purpose admirably. Blood was prevented from entering the trachea, by the passing above the tube of a small piece of sponge, to which was attached a


several layers of gauze tied over top of funnel - to retain anæsthetic
Thermometer case with large openings cut to admit of passage of chloroformed air
cork to prevent anæsthetic from running down tube
Openings to admit fresh air can be closed by the fingers
tubing
Tracheal tube

ligature, to guard against its accidental passage into the trachea or œsophagus. For the benefit of those who may be placed in a similar position, I show a rough drawing of the inhaler, which can be made by any one, in a few minutes, without other tools than a pocket knife and a pair of scissors. The growth was removed piecemeal, by forceps and scissors, and its site and even beyond thoroughly curetted with a sharp curette. Bleeding was controlled by hot water and pressure, the wound approximated by silk sutures and the patient put to bed. She bore the operation nicely and recovery was uneventful. The tracheotomy tube was removed on the second day after the operation, and the wound allowed to close. She left the hospital on the 29th with the wound healed, mobility of cords about half of normal, voice a clear whisper. The mucous membrane was thickened in places, and it was feared that a return would take place. I show here the portion removed by thyrotomy, about half as much more I removed with the Mackenzie forcep. Following is the microscopical report of the specimen by Dr. J. M. Van Cott, of the Long Island College Hospital. "Examination of the material from throat of your patient reveals it to be composed of vascular pedicles covered with a layer of compound, squamous epithelium. It is a benign growth and belongs to the order of polypi." This hardly agrees with the picture presented by the growth *in situ*, for it was that of a typical papilloma; it may be explained by the fact stated by Lennox Browne, that "not unfrequently more than one variety is found in different sections of a specimen." (Dis. Throat and Nose, 3d edit., p. 450.)

The patient was not seen again until February 4, 1890, when I was called to her house. She had caught cold four days before, had a sore throat, and was suffering extremely from dyspnœa. The laryngoscope showed general congestion, and irregular thickening of all the tissues, but no well defined growth. Believing this to be a good case for intubation, I sent for Dr. McNaughton, who has done considerable work in that line, and he concurring in my opinion, inserted the largest size child's tube. This was coughed out twice, but finally was retained much to the relief of the patient. On the morning of the fifth, she had a severe attack of coughing and dislodged the tube and in her efforts to replace it, she pushed the tube down the œsophagus. The breathing again becoming difficult, a small adult tube was introduced with complete relief. The tube was worn five days, when owing to her inability to take sufficient nourishment it was withdrawn. It accomplished its purpose, however, for she afterward breathed comfortably. During this time the temperature ranged from 101 to 103; there was a dry hacking cough, but nothing abnormal could be detected in the lungs, the presence of the tube rendering auscultation difficult and uncertain. On the 15th, I detected tubular respiration over the left lower lobe posteriorly, and on the 17th, râles of various sorts. I may say here that the lung never cleared up. She went along fairly comfortable, being up and about the house, moderate appetite, slight fever, until the 1st of March when she again caught cold, had a rise of temperature and increasing dyspnœa, so that on the fourth it was again necessary to intubate. One day's wearing of the tube relieved all urgent symptoms, and then matters again pursued a quiet and gradually downward course. On the sixth of June, she passed per rectum, the tube swallowed February 5, its presence not being felt until shortly before its expulsion. In the early morning of June 15, she had a severe attack of dyspnœa, and I was sent for, but the child died before my arrival.

In presenting the report of this case to the Association, it is not my purpose to deal exhaustively with laryngeal growths in general, or this one in particular; such a course might interest a society of specialists, but would only weary the general practitioner. Still there are a few points, which I think can be profitably considered, and the first, and to me the most forcible one is *endolaryngeal treatment is not always such a simple matter as it appears to be.* I do not refer to operative procedures, for I think no one should attempt those without first having had considerable experience in general laryngological work; but the application of astringents with a brush, the insufflation of powders, etc., are sometimes followed by an amount of reaction that is alarming. One can never tell in advance how his patient will be affected, the same person behaving differently, on different occasions, as in this case. Knowing that salicylic acid was somewhat irritating, the first applications were made very cautiously, and with everything in readiness for extreme measures, but she bore them so well, that we relaxed our vigilence, proceeded boldly with the treatment, with the result given in the history. I have made many applications to the larynx, both before and since the above experience, without serious consequences, but the lesson taught that day has not been forgotten, and my tracheotomy instruments are always ready for instant use. *The return of laryngeal obstruction by a new growth* is also a matter of interest. While it is by no means rare that tumors of this kind reappear after removal, or similar growths spring up in other parts of the larynx, the thoroughness of the removal, the change in the appearance of the growth, together with the supervention of phthisis pulmonalis, leads me to believe that a deposit of tubercle was the cause of the obstruction, rather than a modified papilloma. A microscopical examination would have settled this point, but a removal of the larynx was not permitted. The family tendency to rapid tubercular formation is further shown by the death from phthisis of the patient's sister, æt 16 (reported above as healthy), which occurred in August 1890, after a four month's illness. *The immediate relief by intubation* shows the value of O'Dwyer's procedure in similar cases, for without it, we would have been obliged to open the trachea. *The length of time the swallowed tube was retained in the alimentary canal*, and the absence of discomfort from its presence, are worthy of note. By courtesy of Dr. McNaughton, I am enabled to show you the tube, and you will see how slightly it was injured by its long subjection to the action of the intestinal contents. I have purposely omitted any reference to the medicinal treatment in the latter stages, for it was of the usual character given to phthisical patients and requires no special mention.

169 State St., Jan. 12, 1892.

WHO SHALL PRESCRIBE GLASSES FOR THE CORRECTION OF ERRORS OF REFRACTION?

BY A. C. SIMONTON, M. D.,
OF SAN JOSE, CAL.

There ought to be but one answer to the above question—those who are competent. In fact, incompetent persons have no business prescribing for any

of the physical ailments of mankind. But right here, in the matter of prescribing glasses for the correction of errors of refraction, is carried on one of the grandest pieces of quackery in the United States. Every individual who perchance offers for sale in the market spectacles, be they few or many, assumes to fill the rôle of oculist in diagnosing optical conditions and deciding what manner of glasses people shall wear, and the smaller the amount of knowledge they possess the greater the assurance with which they reach conclusions.

There is scarcely a jeweler in all the land that does not dub himself optician, perchance because he keeps a few spectacles to sell. But he attempts as a rule, by the use of that word, to convey the idea that he also is competent to examine the eye and adjust glasses for its varied optical conditions. Now, while a jeweler may be an optician in the very limited sense of vending spectacles and possibly a few other optical instruments, in what manner does this qualify him in the science of optics?

The word optician, in the better and broader sense, means an individual versed in the science of physical optics and engaged in the manufacture of optical instruments. A man may, however, perform many parts of the work about an optician's establishment and know nothing of the laws of optics. Running a piece of machinery that will grind a spherical surface on a piece of glass requires no knowledge of optics, and in nowise qualifies the man to examine eyes for errors of refraction. The scientific manufacturing optician does understand physical optics, but being conversant with physical optics does not qualify him in regard to physiological optics. We are dealing with more than an optical instrument when dealing with the human eye. It is not a mere camera obscura; it possesses nerves, blood vessels and muscles, along with its refracting media, and these anatomical, physiological, and physical arrangements by which this organ performs its important function are the most delicate and intricate of any of the structures of the human organism. How important that all the parts act in harmony. How does the scientific optician, even, know that the physiological functions of the various structures of the eye are normally performed when assuming to fit a pair of glasses?

The scientific optician can do nothing more than mechanically, investigate the refractive condition of the eye without taking into account the many sources of error that may mask and vitiate his finding from a physiological standpoint. If the individual conversant with the laws of optics can do no more than this what shall we expect from the legions of jewelers, druggists, Jew peddlers, and street fakirs and others who are pretending to fit glasses to the human eye, most of them with not the remotest knowledge of the science of optics? Oculists who make errors of refraction a part of their life's study, time and again find it extremely difficult to reach satisfactory conclusions in these cases.

Let us suppose the oculist is examining an eye for astigmatism, he finds the accommodation very unsteady; first the lens is adjusted to one meridian then to another, whirling around the astigmatic card in such manner as to result in confusion. What shall he do? Understanding the physiology of the organ and certain therapeutic laws he sets the accommodation as a factor out of the way by the use of atropia. He now reaches his conclusions in regard to the eye as he would a mechanical optical instrument; but this is not all, just at this point comes in the necessity of fine discrimination as to what amount of correction that eye will bear when the physiological function of the ciliary muscle returns. What would the optician, jeweler, or spectacle peddler do in such a case? A large percentage of them would presume to guess at something and give the patient glasses, for as I heard one of them say recently, "we must fit glasses in order to be in the swim—in order to sell our share of them." There it is, because jewelers keep glasses to sell and a few pretend to fit glasses, others must.

In cases of lenticular astigmatism from irregular action of the ciliary muscle how would the optician handle the case? In cases of spasm of accommodation where the emmetropic eye may seem to be myopic, or even a hypermetropic eye seem to be myopic how do the spectacle venders manage them? Here without doubt they must be led into error. Not only must persons unable to detect and overcome these physiological sources of error be led astray in the cases mentioned, but even in the simplest cases they frequently give to people glasses that they should not wear. It is an almost every day observation to find people wearing glasses not suited to their age or optical condition.

What are the qualifications that ninety-nine hundredths of the self-styled opticians possess who are pretending to fit glasses in every city, town and village in the land? They have given the subject no such systematic study as would qualify them from the standpoint of physical optics alone to tamper with the most delicate of the organs of special sense, let alone the fact that their knowledge of the physiological factors in the case stands a dead blank. Their qualifications as a rule, consist in a stock of spectacles and nose glasses from some manufacturing house, along with their specially scientific optometer and a few pages of instructions which are a regular *multum in parvo* or short cut to the science of optics on the same principal as the lightning calculator. In the course of one week the Professor is ready with his machine to relieve the aching eyes and heads of the unfortunates with optical errors. If this is not quackery, what is?

Not only do spectacle venders commit errors continually in regard to the amount and kind of refractive error, but they palm off on to their patrons, ignorantly I suppose, a large percentage of incorrectly ground glasses, such as never should be placed before a human eye.

Dishonest manufacturers are culpable in this connection. There should be a law against offering in the market imperfectly ground and imperfectly mounted lenses to be used before the human eye, to its detriment, always.

All manufacturers know full well to what extent this, worse than swindle, is carried on. I do not say that all engage in it. Competition may be sharp, but there should be no excuse for a manufacturer sending out optical goods which he knows will damage the eye that uses them. Mere cheapness has no right to be considered here.

In these days of legislation for the protection of the "dear people" from charlatanry generally, I am not sure but a little of it along the line I have been discussing would be wholesome. Why should not men who prescribe for refractive errors of the human

eye be qualified as well as those who prescribe for other conditions of this organ? Are these matters to be so lightly considered when asthenopia with its many neuralgic accompaniments, many inflammatory conditions, and the different forms of strabismus are the frequent results of errors of refraction? Is it not reasonable, from every stand point, to say that this business belongs to the oculist who, alone, can be prepared to comprehend and intelligently meet all the requirements?

I can not better close this article than by making a quotation from the optical catalogue of James W. Queen & Co., of Philadelphia, under the heading of "How to Get Glasses." This is one of the most reliable optical manufacturing houses in America. I quote as follows: "When a person suspects or believes that his eyes may be benefited by the use of glasses, the best thing for him to do is, of course, to consult an oculist, that is, a physician acquainted with the structure and behavior of the human body in health and disease and who possesses special knowledge and skill with reference to the eye. The oculist will determine if glasses are necessary, what glasses will suit best and how much relief they may be expected to afford, and will furnish a formula for the glasses needed. Then the optician, with his mechanical appliances and skill, will be able to supply exactly the glass required. If the person desiring glasses neglects to consult an oculist, the optician may by trial, be able to furnish him glasses that will give relief, * * * but the optician should earnestly advise a person suffering from astigmatism, or who is very near-sighted, or whose glasses need changing very frequently, or whose symptoms indicate some disease of the eye to apply at once to an oculist. No conscientious optician will sell unsuitable glasses simply to get the money they bring regardless of their effect upon the eyes of his customer."

If this is the advice of one of the best manufacturing opticians in America, what shall we say of the thousands of incompetents who are fitting glasses today all over the land? They do not take the advice of James W. Queen & Co., neither have many of them the conscience mentioned. They are in the field to sell spectacles, and the consequences may take care of themselves.

THE VALUE OF PEROXIDE OF HYDROGEN IN THE TREATMENT OF CHRONIC GONORRHŒA, ILLUSTRATED BY A CASE.

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During the past few years, the many articles on new drugs in the treatment of gonorrhœa leave nothing to be desired in this way. The present article contains nothing new, but simply gives the history of a case of chronic gonorrhœa arrested by the use of peroxide of hydrogen—a drug that is "going the rounds," probably to be discarded by reason of its being so unhandy and so little understood.

The following case might serve to illustrate the value of peroxide of hydrogen, when used under conditions favorable to the preservation of the drug.

J. H., citizen, age 23, contracted a gonorrhœa March 20, 1890, and received the usual orthodox treatment by internal medication up to July 7, 1890, the date at which the patient came under my observation. I found a subacute gonorrhœa, which was somewhat relieved by urethral injections, including the iodoformi et tannic acid injection of Dr. Otis.

On August 15, 1890, patient complained of difficult micturition, and upon examining the urethral canal, I found the following condition:

Size of urethra at bulb, No. 32 French; 4 inches from meatus a No. 21 stricture; meatus contracted to No. 20.

The constriction at the meatus was relieved by incision, and the stricture readily yielded to gradual dilatation, and on August 31, 1890, a No. 31 sound was passed without pain. On September 1, 1890, an examination of the urethral canal showed the presence of a small ulcer at the site of the old stricture, and stimulating injections were ordered—without, however, relieving the "morning drop." This drop I examined microscopically, and found pus and mucus corpuscles, with small gonorrhœal threads.

On December 10, 1890, I again examined the urethra, and found the conditions about the same. I had tried the whole list of antigonorrhœal remedies, including the medicated urethral bougies and the passage of steel sounds, and was somewhat puzzled to relieve the obstinate form which the disease had assumed.

On January 26, 1891, I commenced the use of Marchand's peroxide of hydrogen, 15 vol., and "glycozone," with following results: Two drachms of a mixture of R. Peroxide of hydrogen, ʒss; aqua, ʒjss, M., was used to distend the urethra, and held for thirty seconds, then allowed to escape. The decomposition of the H_2O_2 was very active, showing the presence of pus. I then injected 1 drachm, which was allowed to remain in the canal two minutes. I repeated this procedure t. i. d., and at bedtime injected 1 drachm of "glycozone." This treatment was pursued up to February 9, 1891, when there was no discharge, and the patient declared himself cured.

I had watched this case with great interest, for it was the most obstinate one I had ever seen in not yielding to some one of the many lauded cures for chronic gonorrhœa. During seven months the patient had been under constant treatment, to find at the end that a three weeks' course of treatment by peroxide of hydrogen terminated the case quite satisfactorily.

The above data might naturally turn the reader's thoughts to the nature of the remedial agent that succeeded where all others had failed.

The peroxide of hydrogen used was that prepared by Chas. Marchand of New York. The chemistry of this compound together with the pathological conditions it may be applied to, I will leave to the many advertising agents and will simply state the care with which the preparation should be preserved; for there are factors which utterly destroy the medicinal properties of this valuable agent.

Upon receiving the samples I used, I placed them in a room having a uniform temperature of 52° F. Upon opening the bottles the corks were forced out as though they had been bottled under pressure—this pressure was very slight—but by it we may determine in a general way the amount of oxygen set free since the article was bottled. The liberation of oxygen is caused by a temperature above 59° F.—hence the necessity for keeping the preparation below this

temperature, for upon the oxygen depends the active ingredient.

In the treatment of the case above quoted, I administered the medicinal agent personally in the room in which the preparation was kept. It might be said, that had this precaution been taken with the other injections, they would have succeeded; but having every reason to believe that my directions were rigorously carried out, I only took the precaution of personal supervision on account of the easy destruction of the agent I used, by a factor in every household i.e., *Heat!* Let Dr. Squibb be heard: "Changes in this solution are indicated by the formation of bubbles of gas which arise through the liquid or adhere to the sides of the bottle, and also by increased pressure within the bottles. At or below 59° F. the solution does not change for a long time, at 68° F., it does change, sometimes very rapidly giving off oxygen gas. The solution, whether strong or dilute, should be kept cool outside the window of the sickroom in winter, and on ice or in ice-water in summer. The bottles in which the solutions are contained must not be held in the hand, as its warmth will cause decomposition." Again, "If all pharmacists should undertake to keep it—or even all the prominent ones—it would soon share the fate of many other important medicines."

I publish the above with the concurrence of a medical friend.

THE MISSION OF THE ASSOCIATION OF THE MILITARY SURGEONS OF THE NATIONAL GUARD OF THE UNITED STATES.

BY N. SENN, M.D., Ph.D.,

OF CHICAGO,

PRESIDENT ASS'N MIL. SURGEONS OF THE NATIONAL GUARD OF THE UNITED STATES, SURGEON-GENERAL W. N. G., PRESIDENT ASS'N MIL. SURGEONS OF W. N. G., HONORARY MEMBER MILITARY ORDER OF NEW JERSEY, MEMBER SOCIETE DES CHEVALIERS SAUVETEURS DES ALPES MARITIMES, PROF. OF SURGERY RUSH MEDICAL COLLEGE.

Surgeons of the National Guard, Ladies and Gentlemen: Every good citizen takes a just pride and a deep interest in the safety and prosperity of his country. His patriotism should bear a direct ratio to the degree of freedom and protection he enjoys and the richness of the natural resources within his reach. If freedom, protection, and prosperity are the elements which are productive of patriotism every citizen of the United States is or should be imbued with love and gratitude for his country and ready to defend it in times of danger. It is a great privilege to be a citizen of the greatest country on the face of the earth, and to belong to the most powerful and progressive nation in the world. Our country has taken a place in the front rank among the ruling nations. Its brief history is an unbroken record of unparalleled growth and prosperity. Its inhabitants composed of the best elements of most every civilized nation, have made good use of the wonderful opportunities presented and have built up cities and industries which have become a source of admiration and envy everywhere. Since the war of Independence and foundation of this, the greatest Republic, a little more than a century ago, we have become the leading nation, not through the influence of a large standing army, but by developing the unlimited resources within our legitimate reach, aided by a wise administration of the laws made by the people and for the people. During this short period of our existence as a nation we have taken an enviable position among the powers of the world, and our beautiful flag, the star-spangled banner, is respected and admired wherever it is unfolded. The Stars and Stripes are everywhere recognized as a symbol of liberty and equality. The history of the war of Independence, and more recently, of the war of the rebellion, has proved to the outside world that the American citizen is a born soldier. Within a few months, during the late great conflict, large armies faced each other in deadly combat, and on each side a heroism was displayed never excelled before. Battles were fought such as the world never has seen before, nor since. The endurance, discipline, and courage of our citizen soldiers have become a matter of honorable record and have never and are not likely to be surpassed by any standing army. Our country came out of this great struggle greater than ever. There is now no North and no South. The "gray and the blue" celebrate their war experiences side by side, and relate their victories and defeats without sectional feeling. The star-spangled banner again floats over a harmonious and peaceful nation and is revered and loved as dearly in the South as in the North, and should the time come when it is in danger the whole country will rise in its defense. What a happy choice our forefathers made when they selected the eagle as the emblem of our country! Like the King of the Skies that knows no rival in his sphere, our country has outstripped the Old World in everything that pertains to the welfare of its people. The mingling of many nations has produced a race peculiarly well adapted for self-government. Our little standing army, composed of less than 25,000 men scattered in small detachments over a vast territory, has been seldom called into active service, except occasionally to subdue a hostile band of Indians on the frontier. Should an emergency arise necessitating military interference either in the defense of our borders or to crush anarchism, our standing army would be too small to answer the requirements.

Fortunately every true American citizen regards himself as a guardian of public peace ready to defend his rights and ever ready to protect the country of his birth or adoption. The National Guard of the United States, numbering about 100,000 citizen soldiers, is a military body of far reaching influence and great power. It is composed of the very best elements of society. It represents almost every profession, trade and business interests. It is composed of men who, under all circumstances, are loyal to their general and respective State governments. It constitutes an efficient police force scattered over this vast country from the Atlantic to the Pacific, and from the British Possessions to the Gulf of Mexico. The citizen soldiers have often been made the object of ridicule and even contempt, but they have shown their patriotism, courage and military efficiency on many critical occasions. When called up[on] they have never hesitated for a moment to sacrifice their personal interests and have obeyed their orders without a murmur, and discharged their duties as soldiers in a manner that would be a credit to professionals. By their prompt response when called into active service and by their soldierly behavior and action, they have nipped many a serious riot in the bud and have saved millions of property

from destruction. As a rule the different States have made ample provision financially and otherwise to secure the service of an efficient National Guard. Should it become necessary to call out the whole force, an army of 100,000 men well equipped and well drilled could be concentrated in any part of the country ready for duty within three to five days. The many strikes and riots which have menaced the peace and personal and public property for a number of years have shown the necessity of an efficient National Guard. Every loyal and peace-loving citizen will consider it a privilege to contribute his share towards securing and maintaining such a force. Money paid out of the State Treasury for such a purpose is well invested. The general Government should do all in its power to favor the organization, maintenance and equipment of a strong National Guard in each State. The force should be doubled in five years. The services of at least one ex-officer of the regular army should be secured by each State. This officer should devote his whole time and energies in perfecting the organization within his jurisdiction, and in active service should have command of the State troops. Everything which can be made serviceable in elevating the standing and in increasing the efficiency of the National Guard will contribute largely toward bettering its medical service. There are now about five hundred medical officers connected with the National Guard service. This is an important part of our citizen soldiery. I have every reason to believe that most, if not all of these officers, are good physicians, but we must all admit that few of them possess the requisite qualifications and training to satisfactorily perform the manifold duties required of a military surgeon. With commendable zeal our regimental and company officers study their books on military tactics during their leisure hours and apply the knowledge thus gained week after week in drilling the men under their command until they become masters of the situation. The non-commissioned officers and privates receive regular instruction weekly, and once a year officers and soldiers spend a week or two in camp, review the work done during the year, make new plans for the future, and return home well versed in the art of war. What did the medical officers do all this time? Few, if any, made a serious study of standard works on Military Surgery and Hygiene. They attended the encampment, wrote prescriptions, or dispensed medicines to those who applied for treatment, occasionally dressed a wound or fractured limb, and only very few imparted their knowledge of the litter drill to a small detail of privates and non-commissioned officers. Most of them, even if they had a desire, had no opportunity to make themselves more proficient for camp or field service. I have often heard the complaint made that the line officers do not show proper respect for the military surgeon and do not treat him with becoming courtesy. How could it be otherwise? The only way to command respect in military circles, as in other positions in life, is by meritorious work, and this is appreciated everywhere. As soon as the military officer has the necessary advantages and inducements to perfect himself in his special work and makes good use of them, he will be recognized and his position in the service will be respected by officers and privates alike. It is apparent that something must be done to raise the standing and usefulness of the medical service. I know of no way of accomplishing this object except by concerted action. The military surgeons must educate themselves. We live in an age of organization, of united effort and concentration of work. The unparalleled advances in science, art and literature that have characterized the last decade are largely due to systematic united work. It is true that a great discovery or an important observation comes occasionally like a flash of lightning from a clear sky, the product of some fertile brain, but the greatest advances requiring thorough scientific investigation have been accomplished by the concerted action of many laboring with the same object in view. The stimulus imparted by the work and success of others is the motor which impels individual effort, and comparison of the results realized becomes either a source of gratification, or acts like a lash that arouses the latent force to renewed action. In our country nearly every profession, trade and business has now its local and national associations. Less than a year ago about fifty surgeons of the National Guard, representing fifteen States, met in the city of Chicago and organized the Association of Military Surgeons of the National Guard of the United States. All present were fully impressed with the necessity of such an Association and manifested a keen interest in its organization. The deliberations were characterized by harmony and a feeling of fraternity prevailed throughout, and every one returned to his respective field of labor with a consciousness that the first steps had been taken towards self-education in the duties of the military surgeon and in elevating the position of the medical staff in the estimation of the line officers.

To-day we have opened our first annual meeting in this beautiful city and have received such a warm welcome on part of the State, the city, the medical profession and citizens seldom extended to a scientific body. As an association we have not yet reached our first birthday, and yet we have attained a membership of over 200. A deep interest in the welfare and prosperity of our Association has been manifested outside of our ranks throughout the United States. The newspapers and medical journals have treated us with every mark of courtesy, and have brought our good work to the attention of military officers, the public, and the medical profession. The general government has encouraged us from the very beginning by detailing for our benefit a number of the oldest and most experienced surgeons to attend our meetings. We have eagerly availed ourselves of their wise counsel in planning the sphere of our work and will look to them in the future for instruction in the practical details of our duties as military surgeons. I am convinced that we have as a body the good will and moral support of the entire National Guard, and particularly of its officers. The future success of this Association is therefore assured, provided its members will do their duty towards themselves and the Association. It is my intention on this occasion to call your attention to some topics which should be earnestly discussed at this our first annual gathering, at the same time I desire to outline some of the work which should be accomplished in the near future by our united efforts, subjects which properly come under the title of this address: "The Mission of the Association of Military Surgeons of the National Guard of the United States."

State Association of Military Surgeons.—Our Na-

tional Association should be the center of our actions and at its meetings a uniform plan for study, investigation and practice should be made and recommended for adoption to the different State Associations. If we do our work well it is only a matter of a few years before nearly every National Guard surgeon will be a member of this Association. The extent of our territory is so great that we can hardly expect an attendance of more than 150 or 200 at any of the annual meetings. The absent members will read our transactions, but will not become infused with the necessary stimulus for work which can only be imparted by being present at the meetings, taking part in the proceedings and coming in personal contact with the members. The actual work must be done nearer home, at shorter intervals, and in smaller meetings. I am strongly impressed with the necessity of the formation of an association of Military Surgeons in each State. These associations should be organized upon a uniform plan and should be legally chartered corporations and in affiliation with the National Association. Meetings should be held at least three times a year, one of them shortly before encampment, at which the work during camp life should be thoroughly planned. Litter drill, first aid to the wounded, camp sanitation and other matters pertaining to the welfare, usefulness and happiness of the civilian soldier should be freely and thoroughly discussed. Each one of these associations should be represented at the annual meeting of the National Association and report through one of its delegates the work done during the year, with recommendations and observations of interest to the national body. The State should not only furnish free transportation, but should also defray the actual expenses of each member attending these meetings.

Appointments by Competitive Examination.—Our Constitution very wisely provides that all National Guard surgeons holding a commission and in actual service are eligible to membership. For reasons which it is unnecessary to mention here, school legislation has been entirely ignored. It is our intention now to unite all military surgeons of the National Guard of this country into one great body for united effective work. We cannot legislate for the past, but we must use our combined influence to secure the best obtainable material for the medical staff in the future. In most of the States the appointment of military surgeons is virtually in the hands of the regimental commander. Personal friendship, political influence and social qualifications have often been more weighty in securing a commission than a thorough knowledge of the art and science of medicine and surgery and other qualifications necessary to make a good military surgeon. This is certainly not as it should be. A colonel is expected to know all about military tactics and discipline, but the law or usage which gives him the unlimited power to appoint his medical officers is a great evil and should be abolished if we expect to fill vacancies as they occur in the future with the best available material. The appointments should be made as in the regular army by competitive examination conducted by a board of medical officers. This can readily be accomplished as soon as each State has its own Association of Military Surgeons. Let each State Association appoint a board of examiners, composed of three members, which can conduct the examination of candidates at any of the regular meetings whenever it becomes necessary to fill a vacancy. As soon as it is generally known that appointments are made on merit and not by favoritism, the reputation of the medical department of the National Guard will be greatly enhanced in the estimation of the line officers, the medical profession, and the public. The standing of the medical officer in military circles and the community will be proportionate to the height of the standard fixed by the examination. When commissions are obtainable only after a thorough and satisfactory examination they will be of some value to their holders, and it will then be some honor to be known and seen as a military surgeon. The requirements of admission into the medical service of the National Guard should be gradually made so stringent that any one who gains entrance will be recognized as a scientific man and physician and surgeon of more than average ability. A commission obtained in this way will then be regarded as of far greater value than a diploma from any of our medical colleges. Let me express the hope that the time is not far distant when the regimental commander shall have no voice in the appointment of his surgeons, but when the door to the entrance into the medical service shall be carefully guarded by a competent medical board and only such candidates are permitted to pass who shall be a credit to the National Guard and an honor to the medical profession.

Medical Corps.—In most of our States the medical officer remains with the regiment, squadron or battery with which he first became identified. If he is connected with a regimental organization he may expect eventually to reach the rank of a major, but if he is attached to a smaller troop, promotion is out of question. It sometimes happens that the pleasant relations which first existed between the commanding officers and a surgeon for some reason or other are disturbed to the mutual detriment of both sides, rendering at the same time military life unpleasant. It is also often the case that military surgeons are placed on duty with their organization in localities much nearer the home of another colleague than his own, making it necessary to travel unnecessary distances to supply the command with medical aid. For these and other reasons it would be advisable to establish a medical corps in each State, to be under the supervision of the Surgeon General or a Medical Director who could detail the medical officers for duty as location and other circumstances might dictate. By making the medical officers independent of any particular regiment or smaller detachment many unpleasant experiences might be obviated and the medical service would be rendered more efficient, and often no inconsiderable expense to the State could be saved; at the same time the surgeons would make many additional pleasant acquaintances. I am very anxious that this subject should receive due attention not only here, but in the different State Associations.

Uniform of National Guard Surgeons.—In consequence of the too close identification of the military officer with the organization with which he is connected, National Guard surgeons, when assembled in a body, present a unique and picturesque appearance. Infantry, cavalry and artillery uniforms are worn, thus rendering it often impossible to distinguish between a line officer and a surgeon. It is desirable that this Association take some steps to adopt

a uniform that shall be worn by all National Guard surgeons. As it is becoming more and more the policy of military officers to pattern as closely as possible after the regular army, it seems to me that the uniform of the surgeons of the regular army would be most appropriate, and that we recommend its adoption to the different State Associations. As military surgeons are not only doctors, but also military men, it is only proper that during the meetings of the State and National Associations the members should appear in uniform and greet and address each other during the session not as doctors, but as military men.

Original Research.—Military surgery is at present in a transitional stage. Human ingenuity has exerted itself to the utmost during the last few years in perfecting cannon, guns and other implements of destruction. The smokeless powder and the small calibre conical bullet surrounded by a steel mantel have revolutionized modern warfare. Rapid firing and certainty of aim at a great distance will make the battles of the future of short duration, but the loss of life and the number of disabled by wounds will be fearful. The bullet wounds that will come under the treatment of the Military Surgeon of future wars will present an entirely different aspect, and will call for different treatment than those inflicted by the old weapons. The modern bullet, by virtue of its great penetrating power, will either produce a speedily fatal wound or the injury it produces will be more amenable to successful treatment because it produces less contusion of the soft tissues and splintering of bone than the heavy bullet used in the past. Bruns, Bardeleben and others have made careful experimental researches concerning the effect of the new projectile, but this subject is not exhausted and there is plenty of room for original work by our members in this department of military surgery. The operative treatment of penetrating wounds of the chest and abdomen on the battle field offers another inviting field for original investigation. The various materials devised to dress wounds on the battle field have all their faults and merits, but none of them are perfect and I hope it will be left for some one of you to immortalize himself and this Association by devising a dressing that will answer every requirement on the battle field. The methods of transportation of the sick and wounded, the construction of tents and movable barracks are not closed chapters, and are only susceptible of improvement by original thought and investigation. More ingenuity has been displayed of late years in perfecting firearms and in the invention of machines for wholesale destruction of life than in devising ways and means in saving the lives of those seriously injured. It is our duty as military surgeons to counter-act as far as we can the horrors of war by devising life-saving operations and by protecting the injured against the dangers incident to traumatic infection. Antiseptic and aseptic surgery must be made more simple than they are now, in order that we may reap from them equal blessings in military as in civil practice. Enough has been said to show you that a Military Association of this kind can become an inestimable boon to mankind if some of its members will explore unknown regions and bring to light the priceless jewels of original thought and research. I hope that at each annual meeting at least one or two papers bristling with original ideas will be presented, and I am confident that some of them will be accepted as foundation-stones upon which will be erected the coming structure of modern Military Surgery.

Military Medical School.—For nearly one hundred years our Government has made ample provision for the education and practical training of the officers of the Army and Navy. The Naval Academy at Annapolis, and the Military Academy at West Point, are model institutions of their kind. Hundreds of young men have left these institutions with a thorough knowledge of the science and art of warfare, and many of them have become immortal as leaders of victorious armies in the history of this country. The students of these academies have always been selected from the cream of our population. From the time they enter these institutions they are in the service of our Government. The education is not only without expense to themselves, but they receive from the beginning a small salary which enables them to enjoy many of the pleasures of life. After their graduation they enter military service, with the rank and pay of second lieutenant. They are well prepared for their life work—they have passed through a thorough theoretical and practical training. They are respected and honored wherever duty compels them to go. How different with the medical officer of the United States Army! He has spent a number of years in a high school, academy or college, and three years or more in a medical college at his own expense. He is now required to pass a very rigid examination, and if successful is assigned to some small post, with the rank and pay of a first lieutenant. He is,as a matter of course, a good doctor, but knows nothing of military life and discipline. He is entirely ignorant of the many details of clerical work required of him, and has a most serious time before he can make out a report that will prove acceptable at headquarters in Washington. No wonder that he is made the laughing-stock in his little community until, by hard work and close observation, he has become initiated into military life and customs. He has paid for his education as a doctor, he must educate himself as a military surgeon. Is there any justice or excuse in discriminating to such an extent between a line officer and a surgeon of the regular army? Is it not about time that they should be treated alike and placed on the same level from the beginning to the end? All of the larger countries in the Old World have excellent military medical schools, where the army surgeons are trained not only as doctors, but also as military men. It is a burning shame that no such institution exists in this the greatest and richest country. Let us, as an Association and as individuals, do all in our power to secure proper recognition for our colleagues of the regular army. Let us use our influence with the officials at Washington and the members of Congress, and ask for the establishment of a model military medical school, in which the military surgeon of the future shall receive his education at the expense of the country for which he is to devote his life. Such a school should be located either at Chicago or St. Louis; both of these cities have excellent railroad facilities, and would furnish an abundance of clinical material. The East has the academies at West Point and Annapolis, let the West have the third National military educational institution. The cadets entering such a school should have a thorough preliminary education, and should be required to study medicine and surgery and the collateral branch-

es for at least five years. The classes would be necessarily small, consequently each member could receive thorough hospital training for at least two years. The graduates would not only be well educated, successful doctors, but also military men, well prepared by practical training to commence their life work. It is well known that many of the surgeons of the regular army, for want of a proper stimulus derived from daily application of their knowledge, gradually lose their interest in their profession, and choose some other occupation in spending a great part of their leisure time. I know of nothing that would do more towards securing their interest in the progress of medicine and surgery than a three or four months' post-graduate course every five years in such an institution. The utility of such a school would also be greatly increased if its doors were thrown open for the National Guard surgeons, who should receive instruction free of expense. I have consulted several members of Congress in reference to the advisability of making an effort to secure the establishment of a military medical school, and I have been assured by all of them that should such a movement come through the proper channel, the request would receive favorable consideration. This important matter should be brought to the attention of the Government and the representatives in Congress, and I express the hope that in less than five years we shall have a military school in this country in which the coming military officers of the Army and Navy will receive a medical and military education which will prepare them fully to enter the service, and in which the surgeons of the Army and Navy and of the National Guard can receive from time to time the necessary post-graduate instruction.

International Congress of Military Surgeons.—The next year the eyes of the whole world will be turned towards this country. All nations will send visitors to the Columbian Exposition. Among them will be a fair percentage of medical men, and many military surgeons. It has occurred to me that it would be a good idea to utilize this opportunity, to take now the necessary initiatory steps towards the organization of an International Congress of Military Surgeons. That such an association is desirable no one will deny, that it can be effected through our young and vigorous Association few will doubt. It is difficult to realize what great things could be accomplished for the benefit of humanity, and the advancement of military surgery, by an association of military surgeons representing all nations. Should you think favorably of this suggestion, I would recommend the appointment of a committee representing as many nationalities as are at our disposal, with power to invite the different nations to send delegates to our next meeting. The delegates can be made members by invitation, and towards the close of the session the Congress could be organized. The Congress should meet as often as the World's Fair, and if possible in the same city. This would always insure a good attendance. Military surgery is a branch of the healing art which not only interests the medical profession, but it is also a subject which deeply concerns Governments, military men and the people at large. The military surgeon is in the employ of the Government, to which he is responsible for his behavior and actions. An International Congress of Military Surgeons would represent the most important branch of non-combatants, and would afford an opportunity to its members to form many personal acquaintances which would become a source of pleasure in times of peace, and of the greatest value and importance in case of war. I trust that this matter will receive your earnest attention during this session, and that in case the plan outlined is deemed feasible and desirable, every member of this Association will do all in his power towards its realization.

Surgeons of the National Guard:—Permit me, in conclusion, to thank you sincerely for the honor you have conferred upon me at the first meeting in electing me as your first presiding officer. It is an honor that I fully appreciate, and that I shall always remember with gratitude. I congratulate the Association upon its rapid growth and the bright outlook for its future success. I am sure that you will all join with me in thanking Col. Chancellor, the Chairman of the Committee of Arrangements, for the work he has done since our first meeting. To his untiring industry, and his earnest devotion to the task imposed upon him, is due the success of this our first annual meeting, the hearty welcome we have received and the many pleasures that await us. St. Louis has immortalized itself in the annals of our Association. The lavish hospitality we are enjoying here can never be duplicated until in the course of time, we again select this city as our place of meeting and Col. Chancellor as Chairman of the Committee of Arrangements. The success of an Association, like that of an individual, depends on hard, honest and persevering toil. Make the cause of this Association your own, and in less than five years the Association of Military Surgeons of the National Guard of the United States will be one of the largest, most influential and useful Associations in this country, honored and respected at home and abroad.

CLASSIFICATION OF DIARRHŒAS — ETIOLOGY AND PATHOLOGY OF SUMMER COMPLAINT.

Lecture delivered at the Fourth Special Course of the Chicago Policlinic.

BY W. S. CHRISTOPHER, M.D.,
PROFESSOR OF DISEASES OF CHILDREN, CHICAGO POLICLINIC.

The diarrhœal diseases constitute a very large percentage of the diseases of infancy, and yet, in the majority of the text-books, they are discussed in the routine manner of years ago.

The recent advances in bacteriology and chemistry have not failed to throw much light upon the etiology and pathology of these diseases, and it is my desire in this course to consider them from a modern standpoint.

It is customary to speak of summer diarrhœa. I avoid the term diarrhœa, and use instead the term summer complaint. Summer complaint includes not only the diarrhœal forms of these diseases, but those forms characterized by constipation, and I hope to show you that many cases which are truly cases of summer complaint, with all the symptoms and the unfortunate results of summer complaint, are characterized from beginning to end by the symptom, constipation. The term summer complaint, therefore, is in this sense comprehensive enough to cover the ground.

Every diarrhœa which a baby may have is not a case of summer complaint, any more than every diarrhœa which an adult has is a case of cholera

morbus. It becomes desirable for me to give you such a classification of diarrhœal diseases as will give you a clear idea of where I stand with reference to summer complaint, what I mean by it, and to what conditions my remarks may be addressed as regards the pathology and treatment of this particular disease.

The most scientific classification of diseases is based upon their etiology, and I beg to offer you a classification of the diarrhœal diseases framed on a sort of etiological basis. This classification is not complete. None of the classifications which have been given of diarrhœal diseases, particularly those of infants, have been satisfactory. Diarrhœal diseases are commonly divided into enteritis, gastro-enteritis, and colitis, upon the supposition that certain anatomical portions of the bowel are involved in the different cases. I hope to be able to show that there is no essential difference between colitis and enteritis, and that the symptoms by which we attempt to separate the one from the other are not due to a difference in the anatomical change of the bowel itself, and that therefore a classification upon an assumed pathology is incorrect, because the pathological conditions cannot be made recognizable with the clinical manifestations.

The classification which I have to offer is the following:

Diarrhœa produced by:

I. Causes arising in tissue change. Nutritional disturbances.
1. Rickets.
2. Scurvy.
3. Tuberculosis.
4. Wasting diseases generally.
5. Nervous diarrhœa.

II. Poisons developed in the blood.
1. Septicæmia.
2. Specific infectious diseases.
   a. Typhoid fever.
   b. Tuberculosis (?).
   c. Malaria.
   d. Amœbic dysentery (?).
   e. Influenza.

III. Poisons developed in or on the intestinal walls.
1. Diphtheria of the bowel.
2. Amœbic dysentery.
3. Thrush.
4. Chronic ulceration of the bowels.

IV. Poisons developed in the intestinal contents.
1. Asiatic cholera.
2. Summer complaint (infants).
3. Cholera morbus (adults and older children).
4. Typhoid fever (?).
5. Amœbic dysentery.

Many of the diarrhœas met with in rickets and scurvy can be explained in no other way than by the assumption that they are produced directly by the nutritional changes themselves. A germicidal theory is untenable, and nothing within the bowels themselves can satisfactorily account for the phenomenon. No doubt, in many of the wasting diseases, diarrhœa is dependent upon similar causes. In every specific disease characterized by diarrhœa, the cause of that diarrhœa is due to a poison developed in the blood. The diarrhœa of typhoid fever is unquestionably produced, not by the ulcers which form in the bowels, but by the same poisons which produce the elevation of temperature; by the same poisons which produce irregularity of the heart's action; by the same poisons which produce bronchitis; by the same poisons which cause the eruption upon the body. It is entirely gratuitous to assume that because there is a lesion in the bowel, that that anatomical lesion is the cause of the diarrhœa which is present. Under the head of specific diseases which produce diarrhœa we have typhoid, malaria, tuberculosis, possibly amœbic dysentery, influenza, etc. The diarrhœa occurring in the course of a wound infection, of course, results from the poison circulating in the blood, and it is interesting to note that this diarrhœa may be either of the dysenteric type, or of the enteric type; that is, the movements may be small, mucous and bloody, or large and watery.

The Löffler bacillus makes no further incursion into the tissues, than the surface of the mucous membrane upon which it causes the diphtheritic false membrane to form. In diphtheria of the bowel therefore, the diarrhœa results from the poisons elaborated at the surface of the mucous membrane. In thrush of the bowel, which occasionally occurs, less frequently perhaps in this country than in France, a similar condition of affairs exists. Ulcers of the bowels, whatever be their origin, form an excellent nidus for the growth of microörganisms; their secretions nourish these organisms, and afford a papulum from which their poisons are elaborated. It is more than probable that the chronic forms of diarrhœa following summer complaint, and characterized by the formation of ulcers in the bowel, are maintained through poisons elaborated at the seat of the ulcers, rather than by the mechanical presence of the ulcers themselves. The recent researches of Councilman and Lafleur of Johns Hopkins, show that in amœbic dysentery, the amœbæ abound not only in the intestinal contents, but also in the ulcerated bowel itself.

The last class of diarrhœas is that in which the poison producing the diarrhœa is elaborated in the intestinal contents themselves. The recent researches of Councilman and Lafleur just referred to, show conclusively that amœbic dysentery is to be put in this class. Poisons can only be formed in the intestinal contents by pathological fermentations and putrefactions of those contents, induced by microörganisms.

With the foregoing classification and remarks in view, I should define summer complaint as a disease or group of diseases produced by poisons developed in the bowel contents and characterized ordinarily by diarrhœa, sometimes by constipation, frequently by fever, by depression of the heart, by engorgement of the kidneys, and by general nervous symptoms such as convulsions, coma, etc.

With this limiting definition in view I wish to consider with you to-day the etiology of summer complaint, and its pathology, including under the pathology, its morbid anatomy, chemistry and bacteriology. Upon the chemistry I wish to advocate a certain method of feeding which I have used continuously for five years and with the greatest satisfaction.

First as to the etiology. We find that summer complaint is a disease par excellence of infancy; it occurs most frequently under the age of two years. If we divide the first two years of life into periods of six months each we find this disease most common in the second period, that is, between six months and a year. Why is this question of age so important? It is a factor which we must take into consideration, for it evidently has a great bearing on this question. An adult can eat generally what he pleases and it will not develop diarrhœal disease, but put a baby under similar conditions and that baby usually develops diarrhœa. Aside from all questions of diet and resistance, there must be something in that baby at

that age which predisposes it to disturbance of the bowel. A child at that age is preëminently a growing animal; this is the period of growth *par excellence*; it is a time of life when the child is adding to its animal tissues; it therefore requires for its food a superabundance of animal matter. It requires, and naturally receives a larger proportion of animal food, that is to say albuminous material, than the adult does. And it is this very albuminous food, from which poisons that are capable of producing effects through the medium of the central nervous system, may be elaborated by microörganisms. All ptomaines and toxalbumins contain nitrogen, and must therefore be formed from the albuminous foods. You cannot produce out of starch a poison that will cause constipation, or fever, or cardiac depression, or any other nervous symptom, except those produced by alcohol, which is the only type of poison that can be produced from starch. The predominance of albuminous food necessary for the growing infant, is therefore a constant menace to it. The rapidly growing infant must have a highly developed absorptive apparatus. We find that the absorptive tissue of the intestinal tract, exists in a greater amount relatively in the infant than in the adult. The so-called lymphoid tissue, that growth which makes up follicles, and which is scattered throughout the alimentary canal, is distinctly an absorptive tissue. We must necessarily have for the infant, if it is to grow rapidly, a superabundance of such tissue, and that superabundance of absorptive tissue is present, but it carries with it its counterbalance of danger. If we have this absorptive tissue there which can absorb the material for growth, it can and does absorb the material for disease. Poisons formed in the intestine therefore gain a much readier entrance into the organism of the infant than the adult. So the important factor of age alone is a predisposing cause of diarrhœal disease because of the preponderance of proteids in the food of the infant, and because of the high development of its absorptive apparatus and also because of the diminished resistance, which the tender age implies.

The reason why deaths from diarrhœal disease do not occur more frequently in the first six months than in the next six months is because children are usually more properly fed during the earlier period. Children may be kept at the breast exclusively during the first six months, but rarely are they so kept at the breast during the second six months.

Prominent among the conditions that produce this disease I would mention bad hygienic surroundings. People who live in poverty have more of this trouble than those who are more favored. Those of us whose work is in the large cities, come in contact with the tenement population who live, sometimes, one or more families in a single room and whose surroundings are such that they cannot be clean. Any one who had to endure the surroundings and the mental depression these people have to endure would be dirty. And they are dirty, they can't help it; what they eat is dirty, what they give to their children is dirty, and bowel troubles among their little ones are frequent.

Another prominent factor in this disease is artificial feeding. Take Hope's very instructive report; out of a thousand cases of death from summer complaint he found only thirty who had been fed exclusively upon the breast. Meinert of Dresden, investigated 602 cases of fatal summer complaint and only twenty-four out of these had been fed exclusively upon breast milk. This tells the tale we all know; I don't care to dwell upon it.

The question of atmospheric heat is very important. The term summer complaint has been given because the disease occurs most frequently in hot weather, but we have cases in winter, so that the term summer complaint is only true so far as it indicates that the trouble occurs most commonly in summer. Here come in the statistics worked out by Seibert of New York and Meinert of Dresden. The mortality from this disease in May is but slightly greater than that in January, and yet the mean temperature is considerably higher. In June there is a considerable increase in the mortality, and in July a very great increase in the mortality from this disease. The observations of Seibert and Meinert show very clearly that as the mean atmospheric temperature approaches 60° F. diarrhœal diseases among infants increase in frequency, and when the minimum daily temperature does not fall below 60° F. these disorders become epidemic. The magic figure is 60; this is the temperature at which most microörganisms begin to thrive. At 32° degrees, or the freezing point, microörganisms remain quiescent, but as the temperature rises their activity increases, and when it reaches 60° they have reached a point where they begin to grow rapidly, and when the thermometer is above 60 their growth is maintained and they rapidly increase; if below 60 they are retarded in growth. It can hardly be doubted but that very hot weather has also a direct detrimental influence upon the infant. Weaning is frequently mentioned as a cause of diarrhœa. There is nothing in the act of weaning itself to cause diarrhœa. But when a child is weaned, it receives a larger quantity of so-called "table-diet," with a corresponding increase in the chances for introducing pathogenetic microörganisms.

Direct infection certainly plays an important rôle. In a foundling asylum, with which I was connected several years ago, we at one time received a baby with diarrhœa, characterized by a peculiar kind of stools. That baby was passing five or six, dark brown, terribly offensive stools daily. Not another child in the institution had just such stools, although they all had diarrhœa, but within three days there were several cases just like the new one. I am satisfied that the particular kind of diarrhœa present in that case was produced by a particular kind of germ, whether one, two or three I don't know, but I believe that that germ got into the food of the other children and produced the same sort of disorder. In other words, there was a direct infection. In that asylum, I instituted a custom of putting the napkins, as soon as they were soiled, into a tub containing a solution of corrosive sublimate. The result was not only a deodorizing of the offensive diapers, but an improvement in the condition of the babies. I am satisfied that infection in the production of summer complaint, is very important, and one of the factors which we often overlook. Do not forget that infection can occur by way of the anus.

Holt, of New York, who has done an immense amount of work in this line, holds that there is always a preliminary dyspepsia in this disease; that before diarrhœa commences the child for several days has abnormal passages, with possibly some disturbance of the stomach; has a little nausea; its

appetite is deranged, and an indefinite general something is present which he calls a preliminary dyspepsia, and he regards this condition as a most important factor in the causation of diarrhœa. I can readily understand that if there is present a catarrhal condition of the bowels, an abnormal condition of the secretions of the bowels, that this may favor the development of the microörganisms producing this disease, but I cannot say that my own clinical observation fully upholds this particular point; I cannot say that in the majority of these cases coming under my observation there is a preliminary dyspepsia. I have looked for it, but I am unable from clinical observation to confirm Holt's statement in toto. Nevertheless, there is in a minority of the cases a preliminary abnormal stage, the nature of which I do not understand, which precedes the actual diarrhœa.

The constitutional condition of the child must also be considered. It is more liable to diarrhœa if its resistance to disease has been diminished by premature birth, syphilis, tuberculosis, rickets, scurvy, or preceding exhausting diseases of any kind. I feel that we are in a position to state that all the etiological factors in the production of summer complaint may be classified under three heads: First, means which favor the contamination of food by microorganisms, and their growth in that food. Second, means favoring the introduction of microörganisms into the intestinal canal and the formation of poisons there. Third, conditions which diminish the child's resistance.

Let me present the following summary of the etiological factors of summer complaint:

- I. Means favoring the contamination of food by microörganisms, and their growth therein.
  - 1. Uncleanly surroundings.
  - 2. High atmospheric temperture.
  - 3. Infection.
- II. Means favoring the introduction of microörganisms into the intestinal canal, and the formation of poisons there.
  - 1. Artificial feeding (in whole or in part).
  - 2. Weaning.
  - 3. Overfeeding.
  - 4. Preponderance of proteid food.
- III. Conditions diminishing the child's resistance.
  - 1. Age.
    - *a.* Natural delicacy.
    - *b.* Preponderance of absorptive tissue.
  - 2. Atmospheric heat.
  - 3. Preliminary dyspepsia.
  - 4. Constitutional Conditions.
    - *a.* Premature birth.
    - *b.* Hereditary diseases.
    - *c.* Rickets.
    - *d.* Scurvy.
    - *e.* Other debilitating influences.

Very important information has been furnished by bacteriological investigations in this disease.

Booker, of Baltimore, and Jeffries, of Boston, have taken from the stools of babies suffering with various forms of cholera infantum and summer complaint, specimens, under the most careful and rigid conditions. They introduced double sterilized tubes into the bowel of the child and obtained some of the contents as they came out of the bowel, and investigated these specimens carefully as to the microörganisms they contained. The results obtained by these gentlemen are absolutely classical, and it is gratifying to know that Americans have done this exceedingly laborious work. They tried to find out what they could about microörganisms in the stools of children suffering from summer complaint, and what did they find? Millions and millions of microörganisms. The very fact that we have a foul stool shows that we have a fermenting mass in which microörganisms are growing. From the stools of thirty infants suffering from various forms of diarrhœa, Booker separated forty varieties of bacteria. This by no means represents the whole number of varieties present, as the methods of bacteriological examination in use at present do not permit so complete an examination. The greatest number of varieties found in any given case was eight, but no one kind of organism was found in all the cases. Bacteria of the proteus group seemed to predominate in the severer cases.

Three of the varieties separated by Booker were investigated chemically by Vaughan, of Ann Arbor. Vaughan grew these separately in cultures in beef broth, and passed them through Pasteur filters, thus separating the germs from their chemical products. From each of the sterile cultures he separated a proteid poison. Each of these poisons, when injected under the skin of kittens or dogs, produced vomiting and diarrhœa, and when administered in sufficient quantity, collapse and death followed. In other words, he obtained poisons which were capable of producing the advanced signs of summer complaint as we meet them in the baby. Each poison was a proteid, and each different from the others; he found that none of the three were alike, he could recognize a chemical difference. So there are at least three poisons we know of that will produce summer complaint and they are no doubt the same poisons that are in the intestinal canal, the same poisons that produce the stools. We have three, but we need not stop at three, we may assume that there are many kinds of microörganisms, and that there are many different kinds of poisons which are capable of producing this disease.

Now if that is the condition of the bowel in a child suffering with summer complaint what is the condition of the bowel in a child that is perfectly healthy, in the breast fed baby having normal stools? In the first place, when a child is born, its bowels contain meconium, which is sterile, but within seven hours microörganisms have gained entrance to the meconium through the anus and the mouth; within seven hours after the baby is born, whether it has taken a drop of anything or not there are microbes throughout the intestinal tract. Within a few hours the meconium that the baby passes is found to contain an exceedingly large number of microbes, and they are not only numerous but they exist in great variety. When the child begins to feed at the breast, we find the character of the stools changed and the ordinary yellow stool of the breast fed baby takes the place of the dark brownish green meconium originally present. With this change in the stools, a great change in the variety of microörganisms discharged from the intestinal canal also occurs. The microörganisms formed in the meconium disappear and in their place we have two, the bacterium coli commune, and the bacterium lactis aërogenes, which make up the great bulk of the bacteria present. There are also some accidental microorganisms, but the two named are constantly present, and are characteristic of the milk stools of the healthy infant. That is an exceedingly important fact. It shows that healthy milk stools are capable of supporting only a small variety of microörganisms, and even though the bowel contents were contaminated by a wide variety of microörganisms before the

milk of the mother's breast was put into the child's bowel, as soon as the milk does reach there, just so soon do these microörganisms die out. They die because the food they need to maintain life is gone; they die because the food going into the canal is not capable of sustaining them. And this supplies us with the keynote to the handling of the bowel complaints of children by dietetic measures. If you have in the intestinal canal a mass of microörganisms that are living upon a certain kind of food and producing poisons which are making diarrhœa or depression, and you take that food away from them, you will kill the microörganisms by a process of starvation; you can't get them out in any other way, and that the starvation plan is possible, is shown by the change which normally occurs in the bacteria present in the intestinal canal of every healthy baby when the milk stools appear. Practically I know it is possible also in intestinal diarrhœal troubles. So far as microörganisms go we know they are producing some result; what do we find pathological in these cases? I shall have a word to say upon the morbid anatomy of summer complaint, and only a word, as I do not regard this factor as of the highest importance. The best exposition of the morbid anatomy is that of L. Emmett Holt of New York. He investigated a large number of cases anatomically and microscopically and found that if a child had summer complaint for a day or two and died as a result of severe cholera infantum there was not found at the autopsy any serious lesion of the bowels; there might be a little desquamation of the epithelium but nothing more marked. If, however, the child died after a week's duration of the disease more marked lesions were found. By this time the lymphoid tissue of the solitary follicles was involved. These little absorbing masses of lymphoid tissue were thickened. With a greater duration of the disease, the swelling of the follicles resulted in more or less destruction of these bodies, with ulceration. Ulceration was not found prior to the second week of the disease, and extensive ulceration, involving other structures of the bowel, can only be considered well established when the disease has lasted three weeks or more. The most marked lesions were found in the colon. To my mind, this involvement of the lymphoid tissue, and the progress of the lesions coincidently with the duration of the disease, is most significant.

Why does the lymphoid tissue swell? Wherever we find lymphoid tissue we find it swelling when poison comes in contact with it; if poison comes in contact with the tonsils they will swell; if poison passes through a so-called lymphatic gland, it swells; and so it is in the intestines. Poisons are formed there from the mass of putrefying contents and when these poisons pass through the lymphoid tissue, they cause it to swell and finally, from the interference with its nutrition thus produced, to break down and form ulcers. The poisons which have passed through this tissue are evidently the same that have caused the diarrhœa; the same that have produced the other symptoms in the case. Therefore I say that the anatomical conditions present in cases of this kind are but the results of the poisons produced in the intestinal contents and in no sense the cause of the disease. Strümpell, in discussing tuberculosis of the bowel, says that in the diarrhœa of tuberculosis we do not always find on post-mortem that tuberculous disease of the bowel itself exists, and furthermore, when advanced tuberculous disease of the bowel does exist and is shown post-mortem, we have not always had clinically the symptom diarrhœa. In other words, these anatomical lesions have nothing whatever to do with the production of the diarrhœa; they are part and parcel of the symptoms which are produced by the same poisons elaborated in the bowel contents. Chronic diarrhœa is produced when a simple diarrhœa has lasted about three weeks. After three weeks ulcers form on the intestinal walls and microörganisms thrive on the surface of these ulcers which secrete and pour out a certain amount of albuminous material, and this blood serum, or whatever comes out, forms a medium in which microörganisms can grow and manufacture their peculiar poisons; so that if ulcers are present, the microörganisms find a food on the surface of these ulcers aside from the food they had in the intestinal contents, and therefore, by simply modifying the intestinal contents we do not reach the whole cause of diarrhœa. So I would say that a chronic diarrhœa following summer complaint or cholera morbus is maintained by poisons developed on the mucous membranes of the intestines.

With these views of the pathology of the disease, it is easy to understand the wide range of symptoms presented by it, as well as the great variations as to severity which it presents. It becomes unnecessary to speak of the desquamative, catarrhal, or mucous forms of the disease, or to attempt to recognize the follicular form. The severer types so often called "true cholera infantum," do not need to be put into a special category. Theoretically at least, there is no limit to the variety of poisons which may be produced in the bowel contents, and no limit to the symptoms which may be thus invoked. Very frequently indeed do we find putrefaction of retained feces,with the production of various symptoms through the medium of the nervous system, and sometimes it seems that these very poisons produce constipation and favor the retention in the bowels of the putrefying masses in which they have their origin. For this reason it has seemed to me desirable to include putrefactive constipation under the generic term "summer complaint." No doubt a better name than summer complaint could be devised, but it is the least objectionable designation of the summer diarrhœas, and the close relationship, both in pathology and treatment, between summer diarrhœas, and putrefactive constipation, make the extension of the term at least allowable.

SOCIETY PROCEEDINGS.

Allegheny County Medical Society.

Scientific Meeting, March 22, 1892.

J. C. Lange, M.D., President, in the Chair.

Dr. F. H. Edsall read the paper announced for the evening, entitled:

REFLEX HEADACHE.

Mr. President and Gentlemen: In presenting for your consideration this evening the subject of reflex headache, I feel almost as though an apology were necessary for occupying your time with a subject apparently so time-worn and threadbare, yet so pregnant with interest for the general practitioner, as well as for the ophthalmologist,is the subject that I feel confident you will grant me your indulgence for having selected it as my paper this evening.

I am sure that if the physician in general practice could but go over the cases he is called upon to treat, he would find that his aid is more often sought for the relief of headache than for any one ill to which flesh is heir, and I am equally sure he will as often be "put to his trumps" in finding a means of accomplishing this relief as in any disorder of the human economy other than the one under consideration. This arises from an easily understood cause. Headache is such a commonly occurring symptom of many deep-seated and obscure affections that be he ever so skilful a diagnostician the physician is many a time and oft compelled to grope blindly in search of the cause, and in consequence his thrusts at the peace-destroying demon of headache must now and again be wildly delivered. Remedies there are without number for headache; the doctor, and the druggist as well, is never at a loss for a drug or prescription to relieve the throbs of pain which rack the sufferer's brain but he who makes drugs his staff upon which to lean will find too often that he has but a broken reed for his support. It is not, I think, a rash statement, nor one not warranted by statistics, that the majority of recurring, or of persistent headaches, are reflex in character, due to some abnormality in the refractive state of the patient's eyes, or to an imperfectly maintained muscular balance between the sets of little muscles which regulate the motions of the eyes—the much talked about heterophorias of the present day, the muscular insufficiencies of the past, and this being the case, the most that can be hoped for from medical treatment is a temporary obtunding of the pain for which the sufferer seeks relief. The busy practitioner of general medicine is unable to spare the time to go into a prolonged examination of the refractive state of the patient's eyes; in fact it may not occur to him to do so, or he may not have the means at hand to accomplish it were he able to spare the time. Naturally, therefore, his mind turns to the pharmacopœia for something with which to relieve his patient, and he has recourse to one or the other of the prescriptions he has found useful in similar cases. This may, if the case be not of reflex origin, end the matter, but if it be due to eye strain, it will prove of temporary benefit at best, and the patient returns so often to the doctor that the case becomes a bugbear, and at last, discouraged and despairing of being able to further aid him, the physician bethinks himself of his friend, the oculist, and to him the patient is forthwith dispatched. If it be eyestrain that has caused the suffering it is soon determined and quickly relieved.

Now, as to the character of headache due to eye strain. What is there in the structure of the eyes that should cause them to give so much offense in so many of our fellowmen? And why is it that drugs have no power to relieve the aching brain where the eyes are at fault, or at best give but temporary relief? In answering the question may I beg your indulgence in advance if I trespass so far upon your good nature as to cite some points in the anatomy of the eye, which it is necessary for you to bear in mind in order to appreciate the causative action of the eyes in producing headache?

The eye proper, as you know, is a spheroidal body, which may be compared to a miniature photographic camera, the retina representing the sensitive plate. The distance between the sensitive plate and the dioptric apparatus of the eye is a fixed distance; that is to say, the distance between the retina and the back of the crystalline lens is so related that when the eye is at rest and normal in structure, the focal point for light coming from a distant object will be exactly upon the surface of this sensitive plate, known as the retina. Suppose now, however, that this relationship is destroyed through the retina being situated in advance of the point where it should be; that is to say, through the antero-posterior diameter of the eye being shorter than normal, as not infrequently happens. The refractive power, the ability of the optical system to focus the light, is an invariable power, thus then we have a condition in which the optical system is called upon to focus the image of the object observed upon a sensitive plate in advance of the point at which the system is adjusted to focus it. One or two things must then happen, either we must get but a blurred and indistinct image of what we look at or else the focusing power of the eye must be increased. The eyes have an inborn abhorrence for blurred images, and in a case like the one cited, unknown to their possessor, set about remedying the indistinctness of outline. By means of the mechanism with which the eyes are provided to enable them to see objects close at hand, the mechanism of accommodation, the refractive power of the lens of the eye can be increased by making it more convex. Now, in an abnormal eye, such as I have mentioned, this mechanism is brought into play. The need is for a stronger lens to make up for the diminished distance between lens and retina, and it is thus met. In doing this, however, the eyes part with a portion of their power of accommodation. It would be a work of supererogation for me to describe minutely the mechanism by which this ability to alter the focal adjustment of the eye is accomplished. I will merely recall to you what you already know, that the ciliary muscle, by contracting or relaxing, increases or diminishes the convexity of the lens which is attached to it, thereby shortening or lengthening its focal distance. In normal eyes this mechanism is only called upon to enable the individual to see objects close at hand. In eyes that are too short this demand is constant and great in proportion to the amount of shortening. Now, in eyes of this character the eyes are constantly doing, as I have said, a certain amount of the work that normal eyes are only called upon to do at intervals, and if we have super-added upon this, the work necessitated in accommodation, there comes a time when the tired muscle begins to send out plainly-felt reminders of this overtaxed state. So nicely are the eyes adjusted to their work that for a long time they can accommodate for close work and make no complaint, if light and other conditions be favorable, but if the amount of work be exceeded for any considerable time, as in the case where in addition to the work of accommodating for near objects, they must cover up the blurring which would be caused by the shortening of the globe it will not be long before the demand for aid will be felt. It is not so much the continuous work which the eyes are called upon to do which makes the need for assistance felt; that is to say, it is not the work of compensation for the defect in structure, unless this be high in degree, for this would doubtless be unnoticed were it not for the additional demands which civilization makes upon the eyes in the way of close work that gives the fillip which causes the eyes to break down, because the ciliary muscle is doing more work than it is capable of doing for any length of time.

In the normal eye there is rest from work when the eyes are fixed upon some distant object, for then the light falls upon the retina focused by the lens at its least convexity. In the shortened eye there is no rest except during sleep, for if the eye is to see clearly at any time the surface of the lens must be to a certain degree more convex than when the eye is normal, which means a demand upon the ciliary muscle. With the intimate nervous connection between the eye and the general nervous system it is not difficult to understand that the constant irritability thus necessitated should communicate itself to the more distant parts and produce the continuous pain which is noticeable in such cases. I have thus far mentioned only hypermetropia as a condition inducing reflex headache from eye strain. As a matter of fact, any of the refractive errors are equally capable of producing

this condition, and astigmatism more often even than simple hypermetropia is the cause of cephalalgia. This condition is one in which the cornea, instead of being regularly curved throughout its entire extent, is in one meridian in consequence of congenital defect, of disease, injury or from operation become differently curved from the other.

Thus, to roughly illustrate, it is as though a ridge traversed it from one side to the other. In consequence of this there is never any distinct retinal image so long as the defect remains uncorrected, for there being different focal distances for the light coming through the different meridians of the cornea, there is no possibility of focusing both sets upon the same point. The effect of this is to keep the accommodative apparatus in a continuous struggle to bring both sets of rays to a focus, and from the constant struggle weariness soon ensues—sooner, indeed, than in single hypermetropia, and the headaches follow. This condition may be of a variety of characters. There may be an hypermetropia in only one meridian, or there may be an all round hypermetropia with one meridian more hypermetropic than the other, or the eye may be near-sighted, myopic, in the corresponding way, or lastly, one meridian may be near-sighted, the other far-sighted. Myopia or near-sight may also cause headache, not through its action on the ciliary muscle, for in myopia there is less than the usual demand upon this in using the eyes. The eye is longer than it should be and the lens needs less convexity than it normally would. It is probable that the headache and other symptoms traceable to myopia are dependent upon the disturbance in the relationship which exists between convergance and accommodation. To look at an object close by the eyes have to converge in order to bring the image upon the yellow spot. Ordinarily, this is associated with a considerable degree of accommodative action on the part of the ciliary muscle, however, in a myope less use of the accommodation is necessary than normally to see objects close at hand, while there is still need for the same amount of convergance. It is this condition of disturbance which is doubtless responsible for the headaches due to myopia. Still another abnormal condition of affairs in the eyes may cause reflex headache; this was formerly known as muscular insufficiency. It is a lack of balance between the external and internal recti muscles. In converging to look at objects close at hand, there is a good deal of effort put forth by the internal recti muscles. If, as often happens, the internal recti muscles chance to be weaker than normal, the extra effort required to overcome the antagonistic pair of muscles soon causes fatigue, which very quickly produces nervous disturbance.

Having briefly called your attention to the conditions of the eyes which cause headache, I beg leave to consider the signs by which we should be led to suspect the existence of eye defect.

If the patient complains of increased headache whenever his eyes are used for reading, or if the headache only appears after such use of the eyes; and if the headaches are localized about the temporal or frontal regions, the eyes should be looked to for an explanation, particularly if vision is faulty. So, too, if eyes become reddened easily, or the patient shows a disposition to grow sleepy over his reading, be his book ever so interesting. Careful examination of the eyes with proper appliances will generally clear up the diagnosis.

As to treatment, there are but a few words necessary. Correction of the refractive error by proper glasses will usually give marked and quick relief. This correction should be done under a mydriatic, as without this, much of the defect will doubtless be over-looked. Protean nervous symptoms will ofttimes disappear like magic after proper glasses are adjusted, and the sufferer experience a relief before unknown.

If muscular inefficiency exist, this should be corrected by prisms, or by operation, and some attention to the general health is also demanded, as not rarely this is also at fault, and plenty of open air exercise is to be commended. I regret that the short time that has been given me in which to prepare this paper has prevented my making it more thorough and more interesting, but if I have succeeded in pointing out to you the road to relief for any sufferer who may be in your charge, and for whom medicine offers little hope of relief, I shall feel that it has amply repaid me for the work of writing it.

Dr. Davis: Taking the subject of reflex headache as a whole, the paper touched on but a very slight cause of reflex headaches, compared to the many other reflex headaches. Indeed, I am not certain if you eliminate neuralgia and organic troubles, such as tumors and the like that produce pain in the head, if there is any headache that is not reflex. We know the stomach when disordered will produce headache, and many different organs in the body will produce headache; possibly many of the headaches we cannot trace to the exact organs which are affected are reflex. No doubt, the eye in its impaired refraction causes many headaches. On the other hand there are many defects of the eye, even those mentioned in the paper to-night, which will not cause headache, if the general system is in perfect order. I recall very distinctly a case that came under my observation. A patient of mine suffered very considerably with headache. I believed the liver was the source of these headaches along with the fact that she resided in a malarial country. The patient visited a neighboring city, was taken with the headache, was sent to an oculist, who found what is present in almost every eye, a slight degree of astigmatism; indeed, it is an exception for an eye not to be astigmatic, but this in the course of nature, in a healthy body, can be accommodated, so that it really produces no trouble until the system is out of order in some other way; hence in the case I speak of, they went to an oculist who found there was some astigmatism, put on a glass which thoroughly overcame this, but the headaches persisted. The patient returned and came under my care, and was put under treatment to relieve the liver and bad digestion, and she never put the glasses on again until another attack of the liver would occur. There was marked astigmatism, but it would not cause the headache. The natural mechanism was perfectly able to overcome it until the system was out of order in other ways. And so it is in many of the forms of refractions of the eye, not only when the general health is impaired, but as you advance in age, as you grow older and cannot overcome it, it will give rise to difficulties which you never knew you had. If we would just simply stop at the thought of reflex headaches and stop at the eye, I claim we would stop at a very small proportion of the headaches that are caused from reflexed action, and many of the so-called headaches from eyestrain are also caused by a disordered system, that if corrected, the eye strain itself would not amount to as much as sometimes we are wont to find in that respect. I would call attention to the fact that it has also been my misfortune to meet with a number of reflex headaches that were caused by the glasses the patients wore, sometimes a perfectly fitted glass. In a very short time the patient, getting rid of whatever trouble existed, finds that the glasses which were fitted at first are entirely too strong, with the old accustomed power of accommodation, and really finds these glasses producing headaches. In quite a number of cases I have had patients remove glasses which at one time fitted them very nicely, and after being removed their headaches were benefited. Of course, this is not to be blamed on the oculist, but certainly there is a necessity for the patient going frequently to see that the glasses are perfectly adjusted, and not depend on the fact that he went once and had them fitted.

Dr. Grube: I am one of those who believe the oculist finds defects in a great many eyes, and I am also one of those who believe the defects are there. It is but a part of our life that we have defective eyes. The defects are there, and are to be met and recognized, and these defects cause headaches in a great many more cases than we have any idea. We sometimes fail to remember that we are only a link of a long chain of man's history and forget that the man's eye like the eye of the lower animals, is built for long range. Man used his eye for long range many years, and it is only in the last few generations, since the introduction of printing, that

man has taken short range for his eyes. We find our eyes are not built for that purpose. A child is sent to school, and if hypermetropia is not there already it is soon developed by the close work, and I think an investigation would show a large percentage of these eye defects to be in school children, showing the necessity of their being corrected, and I would never undertake to treat a case of chronic headache until I had that element eliminated, until I had the patient examined by an oculist and that part corrected. We have other reflex headaches besides these. We have others which are not reflex, and when the physician has fitted glasses on the patient and dismisses him he has not done his whole duty. One other great element of these headaches, while it is not exactly reflex, is generally blamable on our civilized life, and that is the defective elimination of the uric acid. The great amount of meat diet,of nitrogenous food, must be eliminated from our system, and when the kidneys fail to eliminate this we have the troublesome headaches, which are so very persistent, and which will persist as long as we have the nitrogenized food there.

Dr. Allyn: In regard to the correction of the eye for the relief of headaches, we all recognize, of course, that we have a high degree of hypermetropia, or astigmatism. When a person gets to be 20 or 25 years of age, daily accommodations make glasses necessary. Many times that degree of hypermetropia, or astigmatism, may be in the eyes of a patient without producing the headache of which we are speaking to-night. There is another fault in which our work is employed. It is in the correction of low errors in the hypermetropia, especially such errors as the optician ordinarily overlooks. If you will notice a paper published in the journals recently you will see that there is an array of cases of headaches where there is the slightest degree of astigmatism. There is one point I might add, that even if the glasses are found unnecessary after the health has been restored, there is yet a field for their employment. If a person has a headache without the glasses every week, but with the glasses, once in two or three weeks, their use is valuable as far as any other remedy. A glass that may not fit perfectly, may not restore perfectly, but oftentimes has its use as a remedy.

Dr. Edsall: In reply to Dr. Davis' first point, I beg to state that I had originally intended to make the paper wider than it proved to be, but I found it getting beyond me in point of time which I had to complete it, and although I had hoped to touch on the other headaches, which I am perfectly well aware exist, I found it would be impossible for me to do so and make the paper at all worth reading. I had good authority for stating that there are but few causes of headaches in children at least. The authority to which I refer is Dr. Seguin's article in Keating's Encyclopedia of Diseases of Children.

In that, if my memory serves me right, he states specifically there are but two causes of headaches in children, one is eye strain and the other presbyopia. As to Dr. Davis' point in regard to the universality of astigmatism, this is well taken, and I will state that but few cases are on record in which the eyes were not to a degree at least astigmatic. The degree of astigmatism which causes trouble varies very much in different patients. In one case it will cause a great deal of trouble, while in another patient it will be overlooked for a long time. I have been surprised to find the amount of astigmatism in existence, and work comparatively comfortably carried on. I have a case under my care at the present time, and the patient for years has been able to carry on all the duties of life, and has suffered comparatively little until the age when the hardening of the lens made the astigmatism uncomfortably apparent. Presbyopia always brings out defects of this character, and hypermetropia as well, and if the defect is not felt early in life, it will be felt after presbyopia intervenes.

As to glasses causing headaches, here again I will agree with Dr. Davis. These glasses prescribed under mydriatics, in all existing defects of the eye do, for a time, almost invariably, when first put on cause discomfort to the patient. There are also some patients who are able to adapt themselves with little or no trouble, but if the glasses are not put on until after this effect has disappeared, the difficulty of accommodating them is felt much more severely than it would be otherwise, and this difficulty is sometimes so very apparent as to cause headache in itself; but if the patient persists he will find that this factor in causing headaches will shortly disappear. Dr. Allyn brought up some very interesting points. The low grades of astigmatism sometimes cause more suffering than higher degrees do, largely, because, as Dr. Allyn says, they are overlooked. Higher degrees produce so much discomfort that resource is soon had to the ophthalmologist for relief, but the low grades, unless careful examination is made, are overlooked time and time again, and the patient suffers without relief until by chance he falls into the hands of some one who recognizes it, and the defect is corrected. Dr. Chisholm, of Baltimore, before the American Medical Association, said that all cases of astigmatism should be corrected. In some cases in my experience, astigmatism will cause no discomfort for at least some time, but in other cases it causes considerable discomfort. It is no quick or easy matter to correct these defects, even when time and patience are both unlimited. I am well aware that eye strain is not the only cause of reflex headaches, but I still stand by the assertion that it is the most common cause.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopædic Surgery.

Stated Meeting, March 18, 1892.

HENRY LING TAYLOR, M.D., CHAIRMAN.

ASYMMETRY OF THE EXTREMITIES.

Dr. L. W. Hubbard presented two sisters exhibiting this condition. One child had 1½ inch shortening of the left lower extremity, and about 2½ inches shortening in the left upper extremity, which was about evenly divided between the arm, forearm and hand. There was also slight shortening of the left ramus of the jaw. Her younger sister also exhibited about the same amount of shortening of the left upper and lower extremities. The muscles were developed in both cases. Their parents were healthy Germans, and there was no history of a similar deformity in other members of the family. An attempt had been made to explain this asymmetry on the theory that there is an unequal development of the cerebrum on the two sides.

Dr. A. B. Judson had seen a counterpart of these cases in a girl of 11 years, in whom the right ear and eye, as well as the right upper and lower limbs, were congenitally smaller than the left. He suggested wearing an ischiatic crutch on the larger side, and a high sole on the smaller side, during the periods of rapid growth. He thought that hip cases treated in this way owed the disparity in length of the limbs, which is found in the tibia, as well as in the femur, partly to the disease of one, and the over-use of the other. Advantage should be taken of this fact in the treatment of these cases of congenital asymmetry.

Dr. R. H. Sayre said that many writers had denied that want of symmetry in the lower extremities is a cause of true lateral curvature, and held that the occasional association of the two conditions is a mere coincidence. Personally, however, he believed that if the children just presented were allowed to go on to puberty without the employment of measures to equalize the limbs, they would certainly develop true lateral curvature. In one of the cases just presented, the lack of development did not seem to him to be entirely confined to one-half of the body, as the left side of the face appeared larger than the right, although the extremities were smaller on the left side than on the right. On this account, he did not think the theory that this asymmetry was due to unequal development of the two halves of the cerebrum, could be correct.

He agreed with the previous speaker that much of the atrophy following hip disease was due to lack of use, and he therefore heartily endorsed his suggestions as to treatment.

Dr. A. M. Phelps said that his experience had led him to believe that the shortening of the limb in hip disease is never due to anything but bone destruction, and that the employment of the treatment suggested would effect no change in the length of the limbs, although it might increase their circumference.

Dr. R. H. Sayre said that after cases of club-foot have improved sufficiently to enable them to use their feet, it is noticed that there is not only an increase in the bulk of the feet, but also in the length of the bones. It had also been observed, in colleges where careful records are kept of the physical condition of the students, that those who exercise regularly in the gymnasium not only have larger muscles, but are taller than those who do not avail themselves of this opportunity for physical training.

Dr. Lewis A. Sayre read a paper entitled:

RESULTS IN CASES OF HIP DISEASE TREATED BY THE PORTABLE TRACTION SPLINT, WITHOUT IMMOBILIZATION EXCEPT DURING THE INFLAMMATORY STAGE; WITH ILLUSTRATIVE CASES.

He held that absolute immobilization of the diseased joint during the entire period of treatment, as advocated by a number of writers in the past few years, was not always essential to complete recovery, and he presented detailed histories of seven cases in support of this view. The diagnosis in all these cases had been confirmed by other surgeons of recognized ability, who had seen them in consultation. Photographs of five of these patients were exhibited, which showed absolutely normal mobility of the joint, the photographs being taken with both legs straight, and the patient in the standing position, and also with the foot of the diseased side on top of a chair, and again with the patient sitting with the foot of the diseased side on the knee of the opposite side, and the knee of the diseased side dropped so as to make the leg parallel with the floor. One patient was present who could do all motions equally well with either hip, and another, who was shown as a *good*, but not as a perfect cure, who could put either foot on top of a chair in front of him, and who could cross his legs, but who was unable to put the foot on the diseased side in his lap, as could all the other patients whose histories were reported in full.

Dr. Sayre then gave the following statistics of 407 cases of morbus coxarius, which he had treated between the years 1859 and 1889, exclusive of exsections:

First stage	118
Second stage	119
Third stage	82
Not mentioned	88
Total number of cases	407

RESULTS.

Cured, motion perfect		71
Cured, motion good		142
Cured, motion limited		83
Cured, ankylosed		5
Unknown		78
Under treatment		14
Abandoned		3
Discharged		2
Died of exhaustion	2	
" " phthisis	1	
" " pneumonia	1	
" " tubercular meningitis	5	
Total deaths		9
Total number of cases		407

Cases in which the author knew the result, and also the kind of splint worn between 1859 and 1889, excluding cases under treatment:

Cures with perfect motion.	
Long splint	19, or 21.59 per cent.
Short "	54, or 28.12 per cent.
Cures with good motion.	
Long splint	34, or 38.63 per cent.
Short "	86, or 44.79 per cent.
Cures with limited motion.	
Long splint	29, or 32.95 per cent.
Short "	49, or 25.52 per cent.
Cures with ankylosis.	
Long splint	3, or 3.40 per cent.
Short "	1, or 0.52 per cent.
Deaths.	
Long splint	3, or 1.56 per cent.
Short "	2, or 1.04 per cent.
Treated with long splint	88
Treated with short splint	192
Total	280

The plan of treatment pursued in these cases had been rest in bed, usually with a blister behind the trochanter when the case was seen in the early stages, combined with traction in the line of the deformity with such weight as gave the greatest relief, while the body and sound limb were secured to a long splint passing from the axilla to the foot. In certain cases, lateral traction was also added. This was first used by Dr. Sayre in 1868. When the acuteness of the joint spasm had subsided, and the deformity had been overcome, the line of traction having been gradually changed until the limbs were parallel, the child was allowed to get up with the short splint and crutches in some cases, and in other cases, with the long splint, either with or without crutches, according to circumstances. The author did not enter into the details of application, as these had previously been fully described. Cases involving both joints had been treated in the wire cuirass, as far as possible, in order to allow of driving in the sun and air. The limbs were occasionally removed from the cuirass, one at a time, for the purpose of making slight motion of the joint, inside the degree of causing pain. Traction was considered as one of the requisites of treatment, as the author had seen cases go on to extensive suppuration with entire destruction of the acetabulum, from reflex pressure, in spite of constant fixation by plaster of Paris for two years without traction. He had also seen a case of ankylosis of all the joints of the trunk and lower extremities in a case that was kept constantly in a cuirass for nine months without motion. The ankylosis in this case was not accompanied by any fever or pain, so that the supposition that a rheumatic diathesis was responsible for this condition, was untenable.

Cases of exsection had not been included in the table of statistics, as they had been published separately, and most of them had been in such advanced stages when first seen as to preclude the possibility of mechanical treatment.

Discussion.

Dr. Judson agreed with the writer of the paper that traction does not secure complete immobilization, but rather fixation or a fractional and sufficient degree of immobilization. Fixation thus produced, relieves pain and hastens recovery, but does not prevent the correction of deformity, which is brought about conveniently and surely as soon as the patient, wearing the hip splint or the ischiatic crutch, is taught to observe habitually the natural rhythm of walking. Adduction and flexion are thus reduced because the limb reaches outward and downward in abduction, and extension in order to do its share of the work of progression which is thrown upon it by the footsteps is equalized. He had been pleased to find that not only is deformity reduced, but also the range of motion is increased in the joint when the limb is summoned in this way to do as far it can, its half of the work of locomotion.

Dr. Phelps said that while listening to the paper he had been impressed with the striking difference between the statistics presented by the author and those published a few years ago by Shaffer and Lovett, notwithstanding that all these gentlemen used the same plan of treatment. In thirty-nine cases reported by the two last named gentlemen, nineteen had anchylosis, and seven were in a condition almost equivalent to anchylosis. The author of the paper which had just been presented, deserved to be congratulated on the large number of magnificent cures which he had obtained. The speaker admitted that he had become somewhat prejudiced against the long traction splint, partly as a result of experience, and partly because of the publication of the statistics which he had just quoted. Where anchylosis had occurred he believed it was due to trauma which had been produced by allowing the patient to walk upon the apparatus or on account of a joint in the splint which allowed free motion, or because traction had not been made in the axis of the neck. He considered that the introduction of the long traction splint marked a distinct advance in orthopædic surgery, but he thought still further advance would follow attention to the points just mentioned, and it was on this account that he had adopted the plan of complete immobilization. The long traction splint was born of a fever of anchylosis, and a desire that the patient should have exercise, yet in his own experience, which embraced a

large number of dispensary cases of the worst class, anchylosis had not occurred in a single one of the cases which he had treated for the past four years. The members would doubtless recall the cases which he had previously presented, which although completely immobilized for periods of about one year, still had complete motion of the joint. He did not believe that fixation of a joint, either diseased or healthy, resulted in anchylosis. The fact that anchylosis was not a constant result of fixation, proved this theory to be erroneous. The "ossified man," during the early stages of his disease, had been subjected to all sorts of manipulations, yet every joint became anchylosed. He believed the case of anchylosis reported in the paper was due to some affection of the nervous system, and was not the result of the immobilization. Anchylosis is determined by the character of the inflammation, its severity, and duration, the parts involved, and the subsequent cicatricial contraction of the capsule of the joint, and he could not see how passive motion could prevent such destructive changes. The long traction splint, no matter how applied, will allow the foot to be elevated 35° by tilting of the band at the pelvis. He preferred this instrument, however, to the short traction splint. Although he had employed lateral traction at first without knowing that it had been used before, he had since found several references to it in literature, showing that it had been used many years ago by Busch.

While on the subject of the use of the long traction splint, he wished to call to mind the fact that cases of hip joint disease present great differences, and that some which run a favorable course are accompanied by much pain, while others which are associated with extensive destruction of bone, have very little pain. He hoped that every one using the long traction splint would have as fortunate an experience as had the author, but for the present he felt that he must continue to use his lateral traction splint.

Dr. John Ridlon said that in a paper which he had written a few years ago on the subject of fixation and traction, he stated that as he had never met with a patient who had worn the short splint he thought this splint could not be used much in this vicinity. He wished to take this opportunity to say that since writing that paper, he had seen three cases which had previously worn this splint. He had been especially interested in Dr. Sayre's statement that he had secured better results with this instrument than with the long traction splint. Some years ago, he had come to the conclusion that the long traction splint was positively harmful as a walking apparatus, as it seemed to increase "the pumping action" at the joint. That it should do so seemed reasonable, when one recalled the fact that with a traction of from five to ten pounds, and a splint weighing from six to eight pounds, the patient at each step stands upon the splint, lifting the well leg and relaxing all traction. The effect of this upon the joint can be easily imagined, when it is remembered that a child running about, takes two or three thousand steps an hour. That this splint does not exert a harmful influence in this way seems to be still further confirmed by the better results which the author had obtained from the short traction splint. As many of the cases had been treated at different times by both the long and the short splints, it was difficult to say how much of the good result was to be attributed to the one or the other splint. It seemed to him that some cases of hip joint disease seemed to recover no matter what the method of treatment adopted, or even when they were entirely untreated. We had not yet found out what was the essential vital principle in the treatment of each individual case. As an instance of this, he cited the case of a child whom he had treated most carefully for six years, and yet the result was not as good as in the case of a sister of this child who had gone through the entire period of hip disease without any surgical treatment. It was true that some of his cases which should be on crutches, were walking around on the limb, because he was unable to control them, yet he was free to admit that it did not seem to have hurt them.

Dr. Halsted Myers said that the majority of cases of tubercular osteitis of the hip have the primary local focus in the neck of the femur at the junction of the epiphysis and shaft. We can recognize this condition by appropriate tests, and as at this stage, there is no involvement of the cartilages of the joint, it is obviously unnecessary to immobilize the joint; yet it is *most important* that concussion and pressure should be taken from the inflamed and softened bone, and that there should be no possibility of the weight of the body being thrown on that limb. He believed that in a number of cases the disease never extends beyonds this location, and is cured *in situ*. He had no pathological specimens to prove this point, nor has it been investigated as yet; he spoke from a clinical standpoint. In cases where there is erosion of the joint surfaces bearing against each other, he thought motion is injurious, as well as pressure, as is plainly indicated by the presence of reflex muscular spasm, which is a reliable guide. We always find reflex muscular spasm at the point where motion is injurious. On the other hand, immobilization of a disorganized joint *provided pressure is also relieved*, he had never seen to cause any permanent injury to the joint. To show the importance of the relief of pressure in this connection, he stated that in order to relieve pain, he had had to apply traction to a case of hip disease which was wearing a Thomas splint, correctly shaped and applied. Recognizing the importance of this evidence, he had made repeated careful observations, but always with the same result, that traction was in this case necessary for the relief of pain.

Dr. H. W. Berg wished to protest against the feeling of nihilism which might be engendered by Dr. Ridlon's remarks. If we were able to make a purely pathological diagnosis instead of a generic one—"hip disease"—we might be able to point out in advance those cases which would do well, and those which would do ill.

Dr. W. R. Townsend said that while not wishing to detract in the least from the credit due the author for securing such excellent results, he desired to point out the fact that one factor contributing to this end, was undoubtedly the very favorable surroundings of his patients. Again, the author could hardly have selected better cases had he desired to illustrate the traumatic origin of hip disease, and the fact of many of the cases reported having such an origin affords still another reason for the excellence of his results. Bone tuberculosis and an osteitis due to traumatism may give the same clinical symptoms, but they should give different ultimate results.

Dr. Judson said that for a number of years he had kept a description of all hip splints he had applied, and their weight had ranged from one and one-half pounds in the case of a child, to little over five pounds for a large adult.

He thought that some of us were dissatisfied with the hip splint because we expect more than the nature of these cases allows. We cannot cut short hip disease as we can break up chills with quinine. We must put the part and the system in the most favorable position attainable, and then wait for the processes of natural repair. This is best done by making traction, so long as it is needed, and protecting the limb throughout the treatment from the traumatism of walking, while locomotion is freely practiced. Traction and protection are the features of the American method, by which it is distinguished from the Liverpool method of portable leverage, and the London method of recumbent traction. The results obtained by Dr. Sayre are good, but not exceptional. They are within the reach of all who adhere to the plan of treatment which has been outlined.

Dr. R. H. Sayre said that the fact that one man regards a case as tubercular, and another, as non-tubercular, did not change the character of the lesion, nor influence the progress of the disease.

Regarding the question of the occurrence of anchylosis, he said that he believed some cases would become anchylosed whether motion was allowed, or entirely prevented, and as an illustration of this, he recalled a case of double hip joint disease in which the disease on one side was very severe, and was accompanied by extensive suppuration, while on the other side, it ran a much milder course. During the progress of the disease in the latter joint, she was kept in bed or in a wire cuirass, yet notwithstanding this treatment and the apparently mild course of the disease, absolute anchylosis was the result, while in the other joint, good motion was secured. Again, after the disease was apparently arrested in both joints, and both seemed to be equally stiff, passive motion gave a good joint which suppurated but resulted in no benefit on the other side. He had seen a number of cases of disease of both hips and knees, in which the joints seemed to be perfectly fixed until passive motion was instituted. He did not approve of leaving these stiffened joints to be loosened up by the ordinary motions which the patient would make.

Dr. Phelps said he agreed with the other speakers as to the value of forcible breaking up of adhesions under ether, but he could not understand how motion of a joint during inflammation could *prevent* anchylosis. As the inflammatory material which limits the motion during inflammation is absorbed, there will be an increased motion of the joint, and in his opinion, active motion on the part of the patient was better than passive motion. He had frequently pro-

duced by passive motion a return of the pain and stiffness in the joint.

Dr. Townsend could not see how anyone could believe that an osteitis due to traumatism represented the same pathological process as one due to tuberculosis, although the clinical symptoms might be identical.

The Chairman said, that while all must admit that the statistics presented in the paper are not only brilliant, but exceedingly valuable, in comparing them with the statistics of those who do not resort to excision of joints, allowance must be made for those joints which had gone on to excision. This would also affect the mortality. One point which was very strongly brought out in the paper, was the positive, decided, and immediate relief of pain obtained in the majority of cases from traction properly applied. In hip joint disease, it is fair to infer, as is also evident from the results obtained, that if the pain is relieved, the treatment is beneficial to the joint. He believed in immobilization in the acute stage, so far as it could be produced by traction, but he did not believe it was necessary to go up to the axilla and immobilize the spinal column. Sometimes traction must be supplemented by recumbency, and sometimes by the use of crutches; these were all the necessary elements for the proper management of those cases which can be successfully treated by mechanical means. His own experience had led him to think that by far the most efficient method of applying traction was by means of the long traction splint.

Dr. Sayre, in closing the discussion, said that the statistics presented were only those which had been fully completed, and they represented forty years of work. He thought Dr. Phelps had misunderstood him about the question of motion at the joint. He had always advocated, repeatedly and persistently, rest of an inflamed joint, but he *permitted* such motion as the patient would himself make. He did not consider that any motion which would not cause pain was injurious. He applied sufficient traction to prevent pressure on the joint, and it was all-important that this traction should be made in the proper direction. He did not approve of an unyielding strap which, in the splint used by Dr. Taylor and Dr. Shaffer, is attached to the pelvic band and the shaft of the splint; in his opinion, it should be made of elastic webbing.

As regards the etiology of his cases, he did not pretend to say whether or not the processes were tubercular or non-tubercular. At the time he began his investigations, everything was called "scrofula," and medical men believed that tubercle was always found in the lungs before it was deposited in other parts of the body. Having learned from autopsies on some cases of hip joint disease that there were no tubercles in the lungs, he began to doubt the tubercular nature of this disease, and he was led to look upon it as a chronic inflammation resulting from a greater or less degree of traumatism. Now that the presence of the tubercle bacilli furnished a definite basis for a diagnosis, he was trying to learn something about the occurrence of tubercle in these cases. Clinical experience had taught him, however, that whether those cases were tubercular or not, fresh air, good food, and freedom from pain were the essentials for a cure.

Referring to the occurrence of anchylosis, he said that one single case of absolute, firm anchylosis of all the joints in the body was worth more to him than any number of experiments on dogs. In the case which he had reported in his paper, there was no fever, no evidence of any nervous derangement, in fact, there was no constitutional disturbance. To apply a splint without traction is wrong; nothing makes better immobilization than plaster of Paris, and it is much more comfortable than the Thomas brace, yet it is insufficient without traction to overcome the reflex muscular contraction, and to relieve pain. The treatment which he advocated, was the best possible one, no matter what the etiology of the disease.

Dr. John Ridlon exhibited a convenient pocket knife with blades especially designed to facilitate the removal of plaster of Paris bandages.

FOR a case of exophthalmic goitre in a man, Prof. Da Costa prescribed tinctura aconiti, gtt. j, every three or four hours, the dose to be increased to gtt. v. His diet should be bland and unstimulating, and he should rest in the recumbent position as much as possible. Prof. Da Costa said that it is very rare to have exophthalmic goitre in a man; while he has seen hundreds of cases in women, he could count on his fingers all the cases he had seen in men.

DOMESTIC CORRESPONDENCE.

The Inebriate Diathesis.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

An incident in the history of the workings of the inebriate diathesis and its origin and treatment, has come to my knowledge, which seems to me both interesting and instructive. To fully appreciate its significance, I will, with your permission, introduce my account, with some prefactory observations bearing upon the principles to be derived from it, and the lessons to be taught by it.

Neuro-pathologists agree that constitutional diseases of the nervous system, are prone to change their forms. Their aspects, symptoms, their physical manifestations, are indeed liable to such radical variations in appearance, that they are known as distinct diseases and bear different names. And these changes in form occur, not through force of heredity alone, but sometimes they take place even in the life and experiences of a single individual. I have witnessed striking instances of this latter fact in several different persons. Blandford, Maudsley, C. H. Hughes and in fact all the best authorities bear testimony in the same direction.

But in contemplating this great truth, the inquiry will instinctively arise in the mind: What are, after all, the true, the *original* sources of the several recognized forms of constitutional nervous disease? If any one of these morbid affections can readily be transmuted into some other, and different one, may it not be true that there was a time when a very limited number of these forms of disease were in existence? Might not the larger portion of the separate and determinate forms of nervous disease, have been produced by the simple laws of the transformation of the neurotic features?

There are persons who profess to doubt whether dipsomania is a neurotic form of disease, interchanging with insanity, epilepsy, chorea, and with latency of the moral faculties. But the best authorities hold that dipsomania is a form of unstable constitution, and convertible into other well known neurotic diseases. What is there then, to controvert the assumption that, in all probability, dipsomania is itself, the oldest and most powerful neurosis in the whole catalogue of nervous affections? What is there unreasonable in the idea that dipsomania, not only is *not* a feeble and doubtful member of the neurotic family, but that alcohol is in fact the chief and most active parent of that family? Alcoholic excess is as old as any written records of the personal habits of mankind. The chief actor in the second start of the human family in the race of life, seized the first possible opportunity to achieve intoxication in his own person, and he went at the business as though it was not new to him. And the practice and spectacle of senseless drunkenness has continued without material abatement until the present time.

Is there anything strange or improbable in the supposition, that alcohol, through the physical degenerations wrought by it upon the human organism, is the most potent agent in the production of the hosts of neurotic diseases, that to-day are scourging the family of man? Here may be seen, possibly, the explanation of a great deal of insanity and crime—of kleptomania and pyromania—as well as of the development of many diseases; as forms of heart disease, neuralgias, asthmas, and an endless variety of analogous affections.

Of course, there are episodes in life, that aid the great central power of alcohol in the production of constitutional neurotic diseases. Yet these are, after all, of secondary and inferior force. Chief amongst them may be noted physical injuries, and profound and lasting maladies—especially such

as originate from the influence of some constitutional poison—as for example, malaria or contagion.

But these considerations, although plausible, necessarily lack the element of demonstration. The mind of man has not been directed towards the subject in the light of experiment; and human life is too short to collect satisfactory data upon which to base very definite conclusions.

There are other elements, however, which enter legitimately into an inquiry respecting the nature of inebriety, and which are too important to ignore. They go a great way in explaining inebriety as a disease; and, in fact, in many instances, they clearly define the nature and boundaries of the alcoholic malady.

There are several distinct heads under which inebriety may be considered as a form of disease. These may be grouped, however, into one or the other of two great divisions:

1. Inebriety may be viewed as the offspring of some severe physical injury; or of such profound morbid condition as will leave the organism impaired and degenerated.

2. Or inebriety may be considered as a disease *sui generis*—one which must find its root in the human constitution through force of heredity, or through imperceptible changes as life progresses—as through steady and heedless drinking.

The distinctions implied in these several groupings exist, however, more in appearance than in reality—as will be perceived upon further investigation.

It is well known that wounds, particularly of the head, are often followed by a violent crave, usually periodical, for intoxication. It is true also that serious disorders arising from some subtile but effective poison—are sometimes followed by persistent dipsomaniacal excesses.

Again, it is admitted that long continued mental strain and anxiety, may so lower the tone of the constitution, that inebriety is very liable to become developed. This is perceived in innumerable instances, where old soldiers, who have passed through the civil war unscathed, nevertheless fall into habits of drunkenness.

Of course, the alcoholic constitutions may become hereditary through the physical degeneracy it brings upon the organism.

These facts open wide a door that leads to useful knowledge.

Possibly a person who has been wounded, may be cured of inebriety by a surgical operation—and again, where an operation may be impracticable, the inebriety may prove insensible to other measures of relief. Sometimes, too, the depressed constitution of the drunkard may be improved by medical treatment and hygiene, and the drinking habit may thus be overcome.

The *habit* of dipsomaniacal excess, may be weakened by a series of carefully conducted measures, adopted with a view to break in upon the *periodicity* of the disease. This may be done by watching the stage of restlessness and fretfulness, and, before the judgment and moral principles are overwhelmed by the violence of the neurotic crave, withdrawing the patient from the reach and influence of alcohol—until the urgency of the desire is abated. The nervous organism is full of systems and sub-systems of periodical habits. Break them up by persistent interference and interruption, and distempers associated with them will disappear.

Here is clearly implied, or rather displayed in one general group of sufferers, the chief, if not the only cause of inebriety. That cause is, a depressed, degenerate, inadequate nervous system. Still the causes which underlie the depraved condition of the nervous functions, may be, and truly are widely different in their nature.

If, then, inebriety springs so readily from depressed nervous energies when it is brought on through physical injuries, why may we not conclude that inebriety in other instances, may be a symptom of defective powers? There are innumerable sources whence the nervous functions suffer impairment, other than wounds. Hereditary defects, mental troubles arising from the vicissitudes of life, various organic maladies—all may be assumed to have a tendency towards the development of inebriety; while many constitutional proclivities and deficiencies, of which the individual is unconscious, likewise may lead to the establishment of the alcoholic crave. Certain persons do not feel this morbid longing till late in life: while in others, it abates as age advances. These facts point to peculiar constitutional modifications, occurring at stated periods, in particular family strains.

Inebriety, therefore, even though attended by a disposition seemingly callous to every sentiment of honor and morality, is probably evidence, at least to some extent, of a depressed, unstable, and inefficient constitution. Facts as they appear upon the surface, are often exasperating to the last degree. But in every instance of persistent inebriety, there is quite likely—hidden away in an unsuspected part of the organism, some nagging, physical degeneracy.

If there are any exceptions to the rule that inebriety is either a disease in itself, or represents the establishment and activity of some other disease, they are few and indefinite.

But as a variety of causes may be operative in breaking down the powers of the constitution, and many others may conspire to keep these powers impaired, it is evident that the treatment of inebriety must consist in the application of many remedies—and often indeed, of the most dissimilar and even opposite characters. There is no royal road to the cure of inebriety. It is a way difficult, often obscure, and tedious.

An example or two will suffice to indicate the dubious and hidden paths that it is necessary to traverse, in treating the alcoholic besetment.

Heart diseases are common in habitual drunkards. They are frequently developed from the effects of alcohol upon the mechanism of the circulation. But *hereditary* heart affections also, are by no means of rare occurrence; and who knows how much a congenitally defective heart has had to do in driving its possessor to drink? Instability and inquietude of mind and disposition are the often accompaniments of heart trouble. Alcohol (taken either designedly or by chance) will, perhaps, alleviate and steady the disturbed feelings in cases of heart irregularity—and without clearly knowing why, an individual may thus acquire the alcoholic habit. The mental despondencies of heart disease and of dipsomania are much of the same order; and they come very often, no doubt, from one and the same cause, namely, heart disease.

Affections of the lungs, or of the brain, may lead their victims unconsciously into inebriate habits, by reason of the anæsthetic and pleasing effects of alcohol. The so-called alcoholic heredity is, in such cases as these, simply the counterpart of the physical heredity of heart, lung and brain diseases. The inebriate heredity, associated with physical defects, may not always be easily distinguished from the purely alcoholic. But there is a wide distinction to be made between them, both in origin and treatment.

In the light of the foregoing facts and principles, the subjoined notices, taken from copies of the Cleveland *Leader*, of 1886, appear to me of peculiar interest. The exact date of the first excerpt is not remembered. Here it is:

THE BLUE RIBBON TEMPERANCE UNION.—A good-sized audience attended the regular meeting of the Blue Ribbon Temperance Union at Doan's Armory in the East End, last evening. Professor Wood occupied the chair. Rev. B. F. Bowen was present, having just returned from a campaign

of two months in Western Pennsylvania, and he delivered an interesting address upon the development of the temperance movement.

This struck me as meaning something more than what appeared upon the surface. It looked, as read "between the lines," like a cordial endorsement of a man just entering upon a new and improved career.

A short time afterwards, that is, in the issue of the *Leader* of the date October 13, 1886, appeared the following particulars:

INTO THE GUTTER AGAIN.—*Benjamin F. Bowen Sentenced to the Workhouse—A Pastoral Letter.*—Rev. Benjamin F. Bowen's fall from grace is complete. The efforts made by kindly disposed persons to lift him from the depths to which he had fallen through drink have been disregarded, and he is now an inmate of the Workhouse. On Monday night Bowen reached home in an intoxicated condition, and immediately proceeded to create a disturbance. The members of his family were subjected to abuse and finally driven into the street. At that stage of the performance his son-in-law interfered, and delivered him over to the police. Judge Hutchins put an effectual quietus on Bowen in the Police Court yesterday by fining him $10 and costs, and sentencing him to serve thirty days in the Workhouse. Bowen was formerly a Baptist minister, but was removed from the pulpit for misconduct. After some years of dissipation, he apparently reformed during the great Murphy temperance revival in this city a year ago. He conducted himself in a proper manner for several months, and then gave way again to his old craving for drink.

The following letter will be of interest to the many persons from whom Bowen has solicited aid:

CLEVELAND, O., October 11, 1886.

Having learned that B. F. Bowen, a former Baptist minister, is representing himself as an accredited clergyman of our denomination, and by erroneous statements is enlisting sympathy and securing money, we, the members of the Northern Ohio Baptist Ministers' Conference, feel called upon, with the deepest sorrow, publicly to announce, after a careful investigation of Mr. Bowen's past and present life, that on account of gross intemperance and other vices, he, in our judgment, has forfeited all right to ministerial standing.

[Signed] GEORGE THOMAS DOWLING,
Pastor Euclid Avenue Church.
GEORGE G. CRAFT,
Pastor Willson Avenue Baptist Church.
DEACON EZRA THOMAS,
Com. for Northern Ohio Baptist Ministers' Conference.

And now, after five years, the mystery is solved. In the same paper—the Cleveland *Leader*—of the date October 6, 1891, this paragraph may be found, to wit:

CARRIED A BULLET TWENTY-SIX YEARS.—At the request of the late Rev. Benjamin F. Bowen, after his death, which recently occurred at the Cleveland Hospital for the Insane, a post-mortem examination of his remains was made. In the left lung the surgeons found a minie ball weighing 1¾ oz. Mr. Bowen was a brave Union soldier in the war of the Rebellion, and was wounded in battle. A Rebel bullet entered his left cheek, and ploughed its way through his body until it found a lodgment in the lung. He carried the ball for twenty-six years. After the wound healed Mr. Bowen became subject to temporary fits of insanity. Prior to his death he said that he could feel the spells of insanity coming upon him, and in the hope of keeping his condition from the public, he sometimes drank liquor. Rev. Dr. J. H. Hartman is preparing a sketch of Mr. Bowen's life, for publication in the Baptist denominational papers. The sketch will be largely a vindication of the unfortunate clergyman.

Whether this man Bowen was an inebriate before he was shot in battle, I do not know. The injury was sufficient to shatter the best constitution, and beget a craving for intoxication. If, perchance, there was a wavering tendency to drink in earlier life, the wound would infallibly confirm that tendency.

This case carries with it, I think, its own commentary.

Very respectfully, etc., T. L. WRIGHT, M.D.

Bellefontaine, O., October 15, 1891.

Analyses of Food Preparation.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

Figures do not lie, but it is said that false inferences are occasionally drawn from skilful combinations of the cardinal numbers. Otherwise we would be unable to understand why it is that manufacturers of pepsin and other proprietary articles can prove so much in their own favor by means of expert analyses. For instance, we may cite a table containing an alleged analysis of various food preparations appearing in the Philadelphia *Medical and Surgical Reporter*, Vol. lxv, page 612, issue of October 17, 1891, which has been extensively copied.

The skilful compiler of the table did not exhaust the possibilities in the way of calculations. For instance:

The relative food value of bovinine and beef meal, taking fresh lean beef as the standard, which contains 70 per cent. of water, and taking into account the difference in the quantity of moisture, would be

Bovinine contains	83.1	of water	(according to table)			
Beef-Meal	"	8.84	"	"	"	"
Beef-Steak	"	70.	"	"	"	"

Reducing the above to a uniform standard of water, we have

Bovinine	70	Total albumen	equals	17.81	
Beef-Meal	70	"	"	"	9.83

But Professor Chittenden has shown in a recent analysis (Proceedings Philadelphia County Medical Society, Vol. xii, p. 130), that the proteid constituents of Beef-Meal are ⅓ soluble and ⅔ insoluble, which makes a still greater contrast:

	Total Albumen.	Soluble Proteids.
Bovinine	17.81	17.81
Beef-Meal	9.83	3.28

when both are brought to the standard of fresh beef. On the other hand, by removing the superfluous moisture from bovinine, we obtain a similar result:

	Water.	Total Albumen.	Soluble Proteids.
Bovinine,	8.84	54.12	54.12
Beef-Meal	8.84	78.12	26.04

A more satisfactory way would be to compare the food-value by the usual dose, instead of by the ounce or pound. Thus:

Dose.	Total Albumen.	Soluble Proteids.
Bovinine 4 drachms	36 grains	36 grains
Beef-Meal 1 drachm	46.87 "	15.62 "

The absurdity of this style of argument, by which a liquid ready for administration to the sick, is compared with a dry powder, which requires preparation and is largely insoluble, must be manifest to everyone who will give the subject a moment's thought. In the table referred to, the very important fact is entirely overlooked, that all the proteid materials in bovinine are not only soluble but in solution and ready for absorption and assimilation. What other food in the table can be used without preparation, by hypodermic injection?

After all, the value of an article of diet for the sick is not to be estimated by its cheapness in price but by its usefulness and availability in the particular case under consideration. In theory beef-steak might be the strongest and cheapest food for the convalescent and the invalid, but when digestion is feeble, or possibly entirely superseded for the time, the value of an article of food will be measured by its acceptability to the patient, the rapidity or slowness of absorption and its restorative qualities, rather than by its chemical formula or its cost per dose, in cents and fractions of a cent.

One other illustration of the worthlessness of the deductions is sought to be drawn from a table constructed like the one under consideration. It is well known that bovinine contains ten per cent. of old Bourbon whisky, which adds materially to its value as a general restorative and cardiac stimulant. This appears to have been, intentionally or unintentionally, overlooked and omitted from the anonymous analysis quoted by the author of the article in question, which leads to the conclusion that the doctor has been engaged in advertising a proprietary article, instead of promulgating scientific facts, which he apparently labored under the impression that he was doing when he wrote the article to which we have called attention.

Is it at all surprising that medical readers view with suspicion the results of analyses by experts employed by the manufacturers? Why can we not have an analytical board under the auspices or direct control of the American Medical Association, so that we may have all proprietary articles examined and the results published in THE JOURNAL, without fear or favor? MEMBER A. M.A.

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SATURDAY, APRIL 30, 1892.

DRUG MANUFACTURERS AS MEDICAL TEACHERS.

The following circular has been sent to the profession:

Dear Doctor:—At this season of the year the practitioner is called upon to treat patients who have spent a large portion of their time in the house during the winter. They have been breathing the confined house air, which, besides being rendered deficient in oxygen by the necessary combustion going on in stoves, lamps, and gas-jets, is, in addition, more or less vitiated by the poisonous emanations of organic life.

During most of this time there has been imperfect physiological action because there has been complete oxidation. The inter-cellular spaces of the tissues have become clogged up with products of incomplete combustion—imperfect waste and repair.

In consequence of these facts we notice a preponderance of those diseases usually attributed to that indefinite cause—impure blood.

Hence, we observe the tendency to scrofulous manifestations—eruptions, glandular swellings, abscesses and ulcerations; also the tendency to a breaking down of the nervous system, with its varied phenomena; the tendency, again, to a lack of prompt response to treatment in acute diseases and slow convalescence from them; and finally, the tendency on the part of inflammatory conditions of the air passages at this time, unless specially guarded, to become chronic or to develop active degenerative and destructive processes.

To correct the condition we need a remedy that promotes oxidation within the tissues themselves.

Such a remedy is found in ——. However, not only does it thus promote active oxidation, but it also is itself deposited, in its changed or oxidized condition, within the tissues as direct reconstructive material, indispensable to healthy cells and sound tissue-walls.

Thus it proves to be the true alterative agent, inasmuch as it at the same time renovates and nourishes.

Under this remedy we observe an awakened organic action throughout the system and an improvement in every tissue. We soon observe better muscles, bones, nerves, hair, nails, skin, and mucous and serous membranes. The entire system awakens to a more vigorous life and performs its various functions with renewed activity.

In these facts may be seen indications for the use of this remedy, especially at this season of the year, in cases which show consumptive, scrofulous or nervous tendencies.

The preparation referred to in this circular purports to be a mixture of a half dozen hypophosphites with nux vomica, erythroxylon coca, and "various adjuvants."

This has the familiar sound of the sarsaparilla advertisements of the daily press. The sentiments are the same, the logic (?) is the same, and the principle is the same.

A few technical terms have been introduced, but are used in so loose and indefinite a manner as to show that the one who wrote it has principally a befuddling object in view. This is an advertisement which is intended to promote the sale of a proprietary preparation, to extend its use at the hands of physicians. It is quite possible that a physician might, by the sight of it be induced by a hurried reading to prescribe the mixture it advocates, but it is quite certain that there are few so dull as not to be able to detect its sophistries upon a careful reading. It is unnecessary to review the advertisement itself, but it does seem desirable to call attention to its boldest statement, which is the advocacy of a mixture of hypophosphites, most excellent deoxidizing agents, for the purpose of promoting an exactly opposite process, viz., oxidation.

There is a legitimate field for manufacturing pharmacy, and with regard to it, we have naught but words of praise. It is legitimate, it is necessary, that there shall be special workers to supply in the purest quality, and in the best forms, the substances which clinical and scientific research have shown to be useful in the management of disease. But these substances must wait the demand for them. For a manufacturer to attempt to create a fictitious demand for his products by assuming the rôle of medical instructor, is an insult to the profession and a special insult to each individual practitioner to whom he sends his circular. As we see, such men do not hesitate to manufacture explanations of pathological conditions which will apparently favor the use of their remedies.

How absurd it is for men engaged in commercial pursuits to attempt to solve the great and intricate problems of medicine, and how criminal it is to permit the statements of such interested parties to have the slightest weight in deciding questions of treatment.

These are the firms who send drummers out to assist physicians in their work. There is nothing more aggravating than the representative from such houses. He is frequently a doctor who has failed in his own profession, or who has not yet entered upon it, or else a drug clerk, or a man who has already proven himself successful in selling new lines of stoves, or boots and shoes. And yet these very men attempt to instruct medical men on physiological and pathological points, and means of treatment, when they have once succeeded in forcing themselves upon their attention. And we hear of these men discussing how little some physicians know of the matter they have in hand. Poor fools, they forget that the poorest medical man they meet, is infinitely their superior in point of practical knowledge, and has long ago gone over the

subjects they present at the hands of qualified and trained medical teachers.

We are of those who believe that the standard of the medical profession in the United States is high; that the medical men of this country are better educated, and far abler in practice than it is the custom of some pessimists to admit. It never was so low as to profitably receive professional instruction from uneducated laymen.

It is the duty of the profession to uphold its own honor, and to reject such circulars as the one quoted with the contempt they deserve, and to hereafter refuse to consult with the traveling drummer.

A MEDICAL LIBEL SUIT AMICABLY SETTLED.

A libel suit against MR. LAWSON TAIT, of Birmingham, brought at the last Manchester assizes, has been placated in some way out of court, very much to the satisfaction of English medical circles. MR. TAIT, as a surgeon, has many an admirer in this country, but when he is contemplated in the light of a controversialist he has not very many imitators here. He reminds us of DR. JOHNSON's definition of a Scotchman as being "a person who is always positive, and sometimes right."

In this libel suit, if the account given in the London papers is reliable, MR. TAIT was positive and wrong. Briefly narrated, the trouble arose in this manner: DR. ANDREW DENHOLM had treated a Manchester lady-patient according to the APOSTOLI method of electrolysis, her disease being regarded as due to a fibroid uterine tumor. An accident, in the use of the electrodes, caused a vesico-vaginal fistula. On this account, DR. DENHOLM lost his control of the patient, and she passed into the treatment of MR. TAIT, who did a laparotomy and removed the growth. But the patient died, and MR. TAIT wrote a letter to the husband of the lady, saying that in his opinion, the death was attributable to hæmorrhage, due to the rupture of a vessel caused by the injurious inflammation and sloughing set up in the tissues by the electrical treatment. But for this, MR. TAIT stated in his letter, the case would have been unhampered, and recovery after operation nearly sure.

When the knowledge of this letter came to DR. DENHOLM, he could not rest under its aspersions, but caused an autopsy to be made of the deceased patient, in the presence of a competent jury or company of medical men. The autopsy was reported as refuting entirely the allegations of MR. TAIT as to the effects of the earlier treatment by electrolysis: there had been no inflammation or adhesions, or hæmorrhage of any moment, sufficient to determine the death of the patient. The fatal issue was apparently caused by peritonitis.

The day for the hearing of the case fell in the latter part of March, when it was announced that the case had been settled out of court, a juror was withdrawn and the contention ceased to be public property. This conclusion was the best attainable after the case had been advanced so far. It had been much better if arbitration before a mutually chosen medical jury could have been arranged earlier in the dispute. To have submitted a case, involving so many technical and intricate questions, to a lay jury, would have been to invite a miscarriage of justice.

SOME FEATURES OF ABDOMINAL SURGERY AT PHILADELPHIA.

The *American Gynecological Journal*, April, contains a letter by DR. A. H. CORDIER, of Macpherson, Kan., recounting his recent visit among the gynecic operators of Philadelphia. He finds with them a low rate of mortality in abdominal work; probably as low as can be shown in any other city in the world. Among the others, DR. JOSEPH PRICE is able to quote a mortality of less than 3 per centum in the abdominal sections of last year. In 1891, he had performed—up to the time that the visit of DR. CORDIER was made—220 such operations, with five deaths. In this list is included ovariotomies, hysterectomies, intestinal resections, as well as others of less hazardous nature. These figures, together with the opportunities the writer had of assisting at the operating table of DR. PRICE, indicate very clearly to his mind that the methods of DR. PRICE have approached as nearly to perfection as can be expected.

Some of the leading points affecting the technique of abdominal surgery may be briefly mentioned. A preparatory treatment, in nearly all cases, includes "scouring inside and out." The bowels are kept regular by salines, after operation, and morphia is avoided. Even in cases where there is intestinal resection, sulphate of magnesia is given on the next day. The anæsthetic is ether. The instruments are few in number, and sterilized by boiling. The ligatures are washed in distilled water during the operation: they are always carefully counted before and after. Pure Chinese silk is the preferred ligature material, as light as is compatible with safety; but for the external wound silkworm gut sutures are employed. The median incision is the one most often made. Ventral hernia has been an infrequent sequel. Adhesions are freely broken down, and thoroughness as to the removal of endangering suppurating surfaces indicates the surgeon's dread of leaving behind any part of diseased sack or fold that can only lead to septic peritonitis and death a few days after the operation. The drainage tube is highly valued, and the one generally used is the straight glass make that comes to us from London. The emptying of the tube is done as often as it refills, even if that takes place every twenty minutes. The tube is emptied by means of a piston syringe having

a long nozzle, disturbing the patient not at all. In favorable cases the tube has not to be retained longer than two or three days. The opening left by it soon closes, and it is the teaching of DR. PRICE that there are no more cases of ventral hernia following this line of procedure than there are when drainage is not resorted to. The drainage tube, he holds, has lessened the abdominal death-rate. Drainage tubes must be of different lengths and sizes. The pedicle, in ovariotomy and pus-tube cases, is ligated with stout silk and "dropped." Hot distilled water is used to flush the peritoneal cavity whenever profuse hæmorrhage or an escape of pus complicates the course of an operation.

Electricity has few friends among the surgeons of Philadelphia. One of the latter is quoted as saying that if a number of specimens are placed before him he "can pick out and demonstate the direful results and mischievous use of the electric current." The abdominal surgeons say that the electricians mar the prospects of the work of the former in two ways, at least: first, by keeping the case away from the surgeon while "tinkering," thus allowing the case to go from bad to worse; and secondly, by the effects of the current converting simple and operable lesions into those with a variety of complications, the removal of which is more difficult and dangerous. "It is rather amusing," he says, "to see how anxious the laparotomist is to have the electrician present to witness a hysterectomy, demanded by the presence of bleeding fibroids of the uterus, having resisted the electrical treatment for months; or to see a case in which large pus-tubes and ovarian abscesses are torn from their firm adhesions, is to make even the electrician realize that all pelvic diseases are not suitable cases for the clay pad and a current of electricity of three or one-hundred milliampères." The surgeons hold that they are themselves the only proper judges of the cases that should be selected for the electrical treatment. If these views are logical and correct, electricity becomes dwarfed down to the servant's place to bide the beck of the surgeon, along with nursing, anæsthesia and antisepsis. In conclusion, it may be said that APOSTOLI's treatment of fibroids has only a moderate popularity at the City of Brotherly Love.

Brilliancy is not aimed at by the type of surgeons represented by DR. PRICE. Neither fine-spun theory nor a cumbrous lot of paraphernalia is tolerated. Simplicity and directness, and the best possible results for the patient, shut out all ideas of display and self-seeking. Great attention to details and care in the after-management of cases are so prominent as almost to become tedious in the eyes of men who have been trained in the school of the brilliant surgeon. Abdominal surgery has progressively increased its demands upon its practitioners for an almost microscopic attention to minor incidents and complexities.

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In the spirit of resolutions adopted at the Nashville meeting two years ago, we have had THE JOURNAL copyrighted. This has seemed to be necessary in order to protect the Association in its rights over its Program and other published matter. This is not for the purpose of curtailing the enterprise of any medical journalists in publishing reports of proceedings, or to prevent their republication of any matter which may at any time appear in our pages, but is to prevent the irregular publication of the Program as an advertising sheet, and also to prevent the abstraction and republication of papers or parts of papers by others than their authors for mercenary reasons.

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Members of the medical profession have, in common with men in other walks of life, an inherent right to a control of the results of their studies and labors.

Because of the spirit which prevents a physician from making claim to secret specific preparations, members of our profession are prone to undervalue their services. On the other hand the tone of honor and morals, among medical practitioners, places them on a much higher plane of integrity than may usually be found among the commercial men of the world. For a prosperous physician to send patients to a needy neighbor is an every day occurrence, but who ever heard of a rich man on a Board of Trade, or in a Merchant's Exchange sending a profitable deal to a friend or competitor in the same line of business. For such an act an inquiry would be at once instituted to find out why he should not be committed to an asylum for imbeciles.

Many of the acts of physicians are a conundrum to the world, but a little inquiry will almost every time show that they are living illustrations of the brotherhood of man. And in no other way is this more fully illustrated than in their refusal to keep secret from one another the fruits of the costliest labor or most trying observations. The knowledge and special attainments of any one is an open book to all others. For this alone hundreds and hundreds of the wisest and most eminent of our guild will about the first week in June wend their way to Detroit.

EVERY State Medical Society should adopt resolutions requesting Congress to pass the Bill creating a Cabinet Officer of Public Health. The Bill is now pending.

* * * * *

STATE SOCIETIES are reminded to send a full number of delegates to the Detroit meeting of the American Medical Association.

THE SECTIONS.

Interest in the work of the several sections of the American Medical Association was never greater than this year. Fears being entertained by some of the officers that the time allotted will be scarcely sufficient to hear all the papers announced and the discussions which should follow; morning sessions of the sections will undoubtedly be agreed upon at the general session of the first day. The increase of members attending the annual meetings makes an arrangement of this sort necessary.

The Sections Committee which will meet on Monday will take up this subject and report such arrangements as will meet the demands of the occasion.

The progress made in the whole field of medicine will be ably reflected by those who have announced their intention to be present. The program will be not only full, but very select.

The chairmen have been active in securing men of ability to open the discussions.

PURE FOODS AND PURE DRUGS.

As we go to press the following important letter comes to hand. Immediate action on the part of medical societies can aid this measure very much.

This makes us realize with emphasis the great need for a Public Health Officer as a member of the President's Cabinet.

To the Editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

I have been informed that a combination of wholesale druggists is at work, through liberally paid editorials in prominent newspapers and other methods of bribery, to create a hostile sentiment in the country towards the Pure Food Bill now before Congress, passed the Senate and unanimously recommended by the House Committee.

The articles appear to have been written by the same pen, used by the same hand. They are gross, unintelligent and most absurd misrepresentations as to the provisions of the bill. Very many druggists of high character advocate its passage. Some of the very best men in the National Wholesale Druggists' Association were its promoters and advisers from the beginning.

Is it not possible to interest the profession throughout the country in the effort, on some organized line, to help counteract the wicked work of these adulterators and manipulators who are thus seeking to poison the channels of information and of public sentiment for selfish gain? Cannot the physicians of the country realize that they ought to make a universal appeal to the House of Representatives, by petition and otherwise, to pass the Pure Food Bill? Let physicians, wherever they may be, who can reach a newspaper, put something into it, in order that the fact may become universally advertised that, through such prompt methods as here indicated, these persons who have been poisoning the food and drug supplies of the people, are striving to defeat this legislation which, if enacted, will take away their wicked occupation.

Let all physicians who read this, at once write on a postal card: "*I am in favor of the Pure Food Bill and urge its passage*," sign and send it to the members for their Congressional District.

This is a matter of protecting the health of the whole nation. Respectfully yours,

EPHRAIM CUTTER,
Sec'y Section of Physiology and Dietetics.

EDITORIAL NOTES.

AMERICAN MEDICAL TEMPERANCE ASSOCIATION.—The first anniversary meeting of this Association will be held on Thursday, June 9, 1892, in Detroit, Michigan. The room in which it will be held and the hour of assembling will be stated hereafter. An address will be delivered by the president on the important differences in physiological and therapeutic effects on the living system, produced by those hydro-carbons developed by vegetable and animal nutrition, as starch, sugar, gum and fat or oils; and those resulting from retrograde metamorphosis or bacteriological action, as the alcohols, ptomaines, leucomaines, etc. Several papers on important questions will be presented and discussed by members of the Association. The objects of this Association are stated in the second article of its constitution is as follows:

II. The objects of the Association are to advance the practice of Total Abstinence in and through the medical profession, and to promote investigation as to the action of alcohol in health and disease, and it aims at being a bond of union among medical abstainers scattered all over our country. It admits as members regular medical practitioners who are practical abstainers from all alcoholic liquors as beverages.

Members are not required to sign any pledge, but if such, for any reason, cease to be total abstainers, it is expected that notice of withdrawal from the Association will forthwith be sent to the Secretary. The liberty of members in prescribing alcohol as a medicine is entirely uncontrolled.

A large and profitable meeting is expected. Physicians who desire to become members before the meeting can do so by addressing the Secretary, T. D. Crothers M.D., Hartford, Connecticut, or the President, N. S. Davis, M.D., Chicago, Illinois.

THE DETROIT OPERA HOUSE will be the next place of meeting. The Surgical Section will be in the same building, and halls for the other Sections are all within a radius of three or four blocks. The Detroit Rink has been taken for the exhibit hall. This has a floor space of 100x170 feet, and the chairman of the committee of arrangements says this will be filled.

Those dealers in physicians' supplies, who have not already secured space, will do well to lose no time in writing to Dr. H. O. Walker for information.

The plan adopted of allowing delegates to register in advance is an excellent arrangement, as it is a time saver. Another prudent procedure for advance delegates to take is to secure hotel accomodations before leaving home.

Tuesday evening the Profession of Detroit will give a reception at the Detroit Light Infantry Parlors.

Wednesday evening, there will be a number of receptions at private houses.

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Thursday, at 3 P.M., there will be a boat ride on the river, with a landing for supper, at one of the summer resorts.

In fact, we infer that about all the delegates and their wives will have to do, after entering the State of Michigan, in order to be the recipients of a most generous hospitality, will be to press the button, when seen on a Michigan doctor, and he will do the rest.

The Michigan State Medical Society meets next week at Flint, in other words, the Committee on entertainment, of the American Medical Association will, on the 5th day of May, assemble in Flint; it is all the same either way.

AN ETHER-SOAP FOR SURGEONS.—Dr. W. W. Keen of Philadelphia, writes to the *Therapeutic Gazette*, March, as to the advantages of an ethereal soap. He has found it the best yet tried for cleansing the hands and keeping them soft. It has the good effect, also, of deoderizing the hands after handling pathological specimens and the like. The bichloride of mercury can be dissolved in it in the ordinary proportions. It can be used in office or in clinic, and Dr. Keen has so used constantly for some time, with great satisfaction. It was devised by Mr. John Johnson, a nurse at the clinic of the Jefferson Medical College Hospital.

BOOK REVIEWS.

THE MÜTTER LECTURES ON SURGICAL PATHOLOGY. By ROSWELL PARK, A.M., M.D., pp. 293 cl. (Reprinted from the Annals of Surgery.)

This volume illustrates the radical changes that certain branches of surgical pathology have undergone, more fully than any text book of the last decade, for there is not a retrospective glance from cover to cover. The author deals exclusively with the present. To those whose knowledge of surgical pathology is confined to Wagner, Billroth and Rokitansky this book will open up a *terra incognita*. The doings of the bacilli, the pathogenic effects of the ptomaines and the toxalbumens are set forth with circumspection and clearness. It is at first a little startling to see dysentery, cholera, scarlatina, pneumonia, typhoid, measles and variola treated of as topics of interest to the surgical pathologist, but this treatment seems to be a quite logical sequence of the general theory of surgical bacteriology for the diseases named are brought under the heading of "*Mixed and Secondary Infections;*" but however closely one may agree with the author that the suppurative lesions accompanying these diseases may be fairly included in the domain of surgical pathology, it certainly does strain a point to include influenza as a surgical affection; but the author is always interesting, many times original, and invariably instructive. We heartily commend the book.

TRANSACTIONS OF THE NEW YORK STATE MEDICAL ASSOCIATION FOR THE YEAR 1891. Volume VIII. E. D. FERGUSON, M.D., of Troy, Editor, and Secretary. New York City, 1892.

This comparatively young organization presents about the finest volume of proceedings that comes to the reviewer's table. Exteriorly the series of eight stout octavo annuals has a handsome appearance, while interiorly the merits are various but generally creditable. The issue for 1891 contains 670 pages, well-printed and fairly well-indexed. The annual address of the President, Dr. Stephen Smith, himself a veteran teacher, treats of the ideal medical school, patterned after that which two thousand years ago was run at Cos by Hippocrates. Dr. Smith finds encouragement in some of the educational reforms that are now taking place in our schools, so that he believes that "the lost art of teaching medicine", known to the Greeks, is about to be rediscovered. All medical teachers who have not beheld the picture of Hippocrates in the midst of his class of students can find inspiration in a view of that scene as sketched in this address.

The discussion of Peritonitis and its Treatment occupies over one hundred pages. Among those who took part were Drs. A. L. Carroll, Stephen Smith, Heneage Gibbes, Harold Ernst, Victor Vaughan, J. Lewis Smith, Tucker Harrison, John Shrady, B. A. Watson, Leale, Fell, Truax, Ferguson, Senn, H. O. Marcy, Janeway, Manley and McCollom. There was also a discussion on Alienism, and the causes of insanity, participated in by Drs. J. B. Andrews, Hurd of Baltimore, E. N. Brush, Wise, Blumer and Granger. The address by Dr. Nicholas Senn on the surgery of the pylorus has already been referred to in our editorial columns. The same is true of a therapeutical paper by the junior Dr. Squibb of Brooklyn. Dr. H. D. Didama, the first President of the Association in 1884, chose for his subject, the changing forms of quackery that are grouped under "mental therapeutic influences." Dr. H. O. Marcy took part in the discussion. Dr. John A. Wyeth has a paper on mammary cancer, with suggestions as to the reduction of the ratio of mortality after operation. Dr. C. S. Bull treats of orbital tumors secondary to tumors of neighboring bony cavities. Dr. Palmer Dudley delivered a gynæcological address on some of the accidents which have attended the progress of this branch of surgery during the past decade. This paper is accompanied with a tabular statement as to seventy-four cases of intestinal injury during or after laparotomy, the result offering a laborious and permanently valuable compilation for the service of other svrgeons. The Orton Prize Essay by Dr. Howard Van Rensselaer, of Albany, treats of impure air and the ventilation of private dwellings. "Money", he says, "is the foundation of perfect ventilation. If expense is no object, it is easy to ventilate a house, but in dwellings with small rooms it is impossible at the same time to have good ventilation, sufficient warmth in winter, and cheapness. One of the three must suffer, and it is usually ventilation." An address on biblical medicine, pointing out the fallacies of faith-cure, mind-cure and the like, is a very elaborate and exhaustive study by the Rev. W. C. Bitting of New York. Dr. Homer Jewett has a paper on the pseudo-parasitism of the larvæ of dipteræ in the human intestines, a well-reported instance of the "rat-tail" larval visitant of man, about which very little is definitely known, but which is believed to be admitted into the human alimentary canal by drinking-water, or by the ingestion of uncooked, waterside-growing vegetables, such as salads and water-cress. Dr. Ludlow Chrystie had a paper on the treatment of disease of the knee-joint in its convalescent stage. The volume closes with a necrology for 1891, and copious lists of members and officers. The total membership is stated at 740, a very large proportion of which number is also contained in the American Association.

SURGICAL DISEASES OF THE OVARIES AND FALLOPIAN TUBES, INCLUDING TUBAL PREGNANCY, by J. BLAND SUTTON, F. R. C. S. Illustrated.

In the handling of this subject, Dr. Bland brings in play his vast knowledge of comparative anatomy and pathology. The subject is treated therefore in a much more scientific manner than is customary in treatises of this kind. Notwithstanding his scientific management of the subject, the

author's extreme dogmatism is strongly reminiscent of another most able exponent of English gynecology. In the matter of tubal pregnancy, the author joins hands with Tait in tearing down the older pathological ideas. The book is handsomely illustrated, most of the views being new.

THE DISEASES OF THE MOUTH IN CHILDREN, by F. FORCHHEIMER, M.D., Professor of Physiology and Clinical Diseases of Children, Medical College of Ohio. Philadelphia: J. B. Lippincott Company, 1892.

The author divides the non-surgical diseases of the mouth as follows: Stomatitis catarrhalis; stomatitis aphthosa; stomatitis mycosa; stomatitis ulcerosa; stomatitis gangrenosa; stomatitis crouposa-diphtheritica; stomatitis syphilitica.

The chapter on aphthous stomatitis is particularly valuable. The term has been used in such widely different senses by different writers, that a strong, authoritative definition and exposition of it, has become most desirable. Dr. Forchheimer separates this disease most clearly and satisfactorily from the other diseases of the mouth, and as his classification includes all of the non-surgical diseases of the mouth, he gives to this much abused term a definite meaning, which it has long needed.

Stomatitis ulcerosa is a disease which has long attracted the attention of pædiatricians and the exposition which it has received in this book can not fail to be most gratifying to those familiar with the subject. The clear elucidation of the earlier stages of this affection is particularly valuable.

The chapter on dentition is the one which will attract the most attention. The author has not failed in times gone by to clearly express his views on this subject, and all familiar with his writings are not surprised to find him dealing a heavy blow at the popular idea of the pathology of dentition. Dr. Forchheimer does not believe that dentition is responsible for any of the manifold evils that are usually attributed to it, and this chapter is a particularly strong argument for these views. It must be borne in mind that these are the views of a man who has for years concerned himself in the clinical observation of sick children, who has thoroughly familiarized himself with all the means of diagnosis in infancy, and his views will therefore be given great weight. It is certainly true that "teething" is a convenient diagnosis; it is always acceptable to the laity, but it usually is a substitute for the correct diagnosis, which could have been made, had the practitioner been more thoroughly familiar with the pathology and clinical manifestations of infancy.

Whether one agrees wholly with the author or not upon this subject, it cannot be denied but that the doctrine of "teething" has been much overdone, and that many deaths have resulted from belief in this doctrine, which could have been avoided. The influence of dentition in the production of disease in infants is certainly so small that better results will follow if it be ignored entirely. It is high time to start a crusade against the teething doctrine.

THE POCKET PHARMACY, by JOHN AULDE, M.D. New York: D. Appleton & Co., 1892.

In this work Dr. Aulde shows the clinical uses of twenty-four different remedies. These remedies are all prepared in pill or tablet form, and constitute a suitable outfit for a small pocket case.

Under each drug appears alphabetically a list of the conditions in which it may be prescribed, and with each topic, short but accurate directions for the particular use of the drug. The author is an advocate of small doses frequently repeated. By a careful study of this small book, and by providing himself with the necessary outfit, there is no doubt but that the practitioner would be benefited.

THE *Medical Press and Circular*.—This venerable English journal of date of March 30, has just arrived, printed throughout in new type, so clean-cut and well-set that it is a pleasure to take up the articles in every department, and read them. Even the advertisements, for the most part, are set in this spick and span new dress. The paper is of a creamy tint, restful to the eyes. Taken as a whole, *The Press and Circular* might serve some of our slovenly-looking contemporaries as an example of the effects of brains and neatness when mixed with printers' ink.

MISCELLANY.

IN our last issue on page 536 Dr. Wm. F. Hutchinson was referred to as formerly of Providence. The Doctor is still of Providence and has no thought of any other home.

ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE.—The Forty-sixth Annual Meeting of this Association will be held at Washington, D. C., May 3, 4, 5, and 6, 1892, at the Arlington hotel.

Tuesday, May 3, 1892.

11 A.M.—Calling to order; Address of Welcome; Appointment of Committees; Recess; Election of Officers; President's Annual Address; Adjournment.

3 P.M.—Discussion: "The Surgical Treatment of Insanity, Epilepsy, etc." G. A. Blumer, M.D., Utica, N. Y., Chas. G. Wagner, M.D., Binghamton, N. Y., Howard A. Kelly, M.D., Prof. of Gynecology, Johns Hopkins Hospital, Baltimore, Md., Geo. H. Rohe, M.D., Catonsville, Md., Chas. A. L. Reed, M.D., Professor of Gynecology, Cincinnati College of Medicine, Cincinnati, O., Alex. J. C. Skene, M.D., Gynecologist to the King's County Asylum, N. Y., Professor Gynecology, Long Island College Hospital, Brooklyn, N. Y.

8 P.M.—"Results from the Study of the Brain of Laura Bridgman." By H. H. Donaldson, M.D., Professor of Neurology, Clark University, Worcester, Mass.

"Mechanical Restraint—A Valuable Aid in the Treatment of the Insane." By H. N. Rucker, M.D., Stockton, Cal.

"What is Restraint?" By C. E. Wright, M.D., Indianapolis, Ind.

Wednesday, May 4.

10:30 A. M.—Unfinished Business; Reports of Committees, etc.; Report on Manual Autopsies; Suggestions for meeting of 1893.

Discussion: "Improved Methods of Caring for the Insane."

John B. Chapin, M.D., Philadelphia, Pa.—General Suggestions; Increased Attention to Acute Cases; The Cultivation of the Hospital Idea.

Benjamin Blackford, M.D., Staunton, Va.—Economy in Hospital Building, Description of New Buildings at Staunton; Economical Use of Patients' Work in Conjunction with the Organized Labor of the Institution.

Richard Dewey, M.D., Kankakee, Ill.—Employment.

Henry M. Bannister, M. D., Kankakee, Ill.—Therapeutics.

No session will be held in the afternoon. The time will be devoted to an Excursion in carriages to the Soldiers' Home.

8:30 to 11 P.M.

Social Reunion. Reception by the President of the Association. Parlors of the Arlington Hotel.

Thursday, May 5.

10:30 A.M.—Report on Reorganization.

"Separate Provision fo Epileptics, both Public and Private." By Henry R. Steadman, M.D., Roslindale, Mass.

A plea for special and separate care of Epileptics in institutions on the cottage plan exclusively for that class. Their removal from almshouses and asylums for reasons which are obvious, will be urged. A description of Foreign Epileptic colonies will be given, as well as other means usual and unusual for the cure of Epileptics. The probable number of Epileptics at large will be given, and the especial need of a refuge for such cases, to whom only the almshouse and the asylum are now open. The disadvantage of their inter-mixture with the insane, to both classes, and the movement taking place in this direction and its progress in different States will be touched upon.

"Affections of Speech in the Insane." By Theodore H. Kellogg, M.D., Flushing, Long Island, N. Y. Affections of speech dependent directly upon physical disease, also those due to disorder of the physical mechanism of speech, with

cortical and organic brain lesions will be considered. Other points noticed will be rhythmic variations in speech, changes in speech rate, the invention and use of new words, pitch quality and intonation of the insane voice, motor and aphasic difficulties.

The afternoon of Thursday will be devoted to an Excursion to Marshall Hall.

8 P.M.—"On the motives which Govern the Criminal acts of the Insane." By H. E. Allison, M.D., Auburn, N. Y. Classification of the Criminal Insane: 1. Those who primarily become insane after conviction and while undergoing sentence. 2. Those who are sentenced and imprisoned for crimes committed while insane, the fact of insanity not being recognized at time of trial. 3. Those for whom the plea of insanity is successfully interposed for "criminal" acts committed while insane, or in whom insanity develops before sentence is pronounced. Methods of disposition and custody of the three classes. Characteristics of the three classes as to social conditions, mental states and abstract knowledge of right and wrong. Character of the crimes committed by the latter class, usually acts of violence and assaults upon the person. Wide prevalence of derangement of the special senses in the third class with hallucinations and delusions of persecution, often associated with much intelligence and understanding. Their processes of reasoning may be logical, but wrong premises exist—the product of diseased minds. What constitutes the dangerous lunatic? Mental characteristics of those who commit minor offenses. Legal and medical tests of responsibility.

"The Care of the Criminal Insane." By O. R. Long, M.D., Ionia, Mich.

Obituary notices of Drs. Richard Gundry, J. P. Bancroft, S. S. Shultz, W. W. Reeves and Joseph Draper.

Friday, May 6.

10:30 A.M.—"The Adverse Consequences of Repression." By Charles W. Page, M.D., Danvers, Mass. The case of a delicate, refined young lady, who uttered obscene and profane language when insane, is cited to illustrate the mistake made by those who attempt to develop mind morals and character upon a scheme of negation and repression. Energy in every form is a positive force and strength of mind and character are best promoted by storing the mind with ideals and thoughts which call for positive action.

"The Cause of Insanity." By R. M. Bucke, M.D., London, Ontario. The attempt will be made to show that the greater number of cases are due to the "instability of the human mind, the result of its recent development."

"Sexual Vices—Their Relation to Insanity, Causative or Consequent." By R. J. Preston, M.D., Marion, Va.

Report of committee on time and place of next meeting.

Adjournment.

ILLINOIS STATE MEDICAL SOCIETY.—The 42nd annual meeting will be held at Vandalia, May 17, 18, 19, 1892.

The meeting will be called to order on Tuesday morning at 10 o'clock, in the G. A. R. Hall.

Sections: Practice of Medicine: Chairman, Thos. M. Cullimore, Jacksonville; Secretary, J. W. Whitmire, Forrest; Address, William E. Quine, Chicago. Surgery, Surgical Specialties and Obstetrics: Chairman, Wm. J. Chenoweth, Decatur; Secretary, J. Homer Coulter, Peoria. Address, James H. Etheridge, Chicago. Etiology and State Medicine: Chairman, James M. G. Carter, Waukegan; Secretary, George N. Krieder, Springfield; Address, Elbert Wing, Chicago.

Committees: Arrangements: Francis B. Haller, Vandalia; Moses Haynes; J. H. Miller; R. T. Higgins; Geo. A. Martin. Publication: David W. Graham, Chicago; Nathan S. Davis, Jr., Chicago; George N. Krieder, Springfield. Medical Legislation: Frederick C. Schaefer, Chicago; B. M. Griffith, Springfield; Francis B. Haller, Vandalia; Thomas M. McIlvaine, Peoria; Geo. R. Cowan, Girard. Legislation for the Insane: Ephraim Ingals, Chicago; Richard Dewey, Kankakee; John P. Mathews, Carlinville; Edgar P. Cook, Mendota; Charles W. Earle, Chicago. Necrology: Ephraim Ingals, Chicago; Robert Boal, Peoria; John H. Rauch, Springfield. Biography: John H. Hollister, Chicago.

Special Notices: The former provisions of the constitution, relating to delegates from local Societies to the State Society, were abolished two years ago. Membership is acquired now only according to the following:

Art. III. Membership: Section 1. All regular resident members of County and District Medical Societies organized in harmony with the spirit and objects of this Society are eligible to membership.

Sec. 2. They may become members at any time by furnishing the Treasurer or Permanent Secretary a certificate of membership and good standing in such local society, the certificate to be signed by the President and Secretary thereof, and accompanied by one year's dues, ($3.00).

Those who desire to attend the meeting who are not already members should bring the prescribed certificate.

3. Members desiring to read papers should notify the officers of the appropriate Sections at once.

4. A detailed programme will be issued and mailed to members before the meeting.

5. Delegates to the American Medical Association, which meets in Detroit, June 7, will be appointed at this meeting.

D. W. GRAHAM, Permanent Secretary.

OHIO STATE MEDICAL SOCIETY.—Forty-seventh annual meeting at Cincinnati, Ohio, May 4, 5, and 6, 1892.

First Session—Wednesday, May 4.

1. Call to order.
2. Prayer.
3. Report of Committee on Arrangements.
4. Business which requires early consideration.
5. Annual Reports of—
   - *a.* Treasurer and Librarian.
   - *b.* Secretary.
6. Reports of Standing Committees—
   - *a.* Committee on Admissions and Medical Societies.
   - *b.* Committee on Finance.
   - *c.* Committee on Publication.
   - *d.* Committee on Legislation.
   - *e.* Committee on Ethics.
7. Reports of Special Committees.
8. Appointment of Committee on Nominations.
9. Papers—
   - *a.* "Home Treatment of Paroxysmal Inebriety," by Dr. L. B. Tuckerman, Cleveland, Ohio.
   - *b.* "The Uses of Alcohol in the Treatment of Disease," Dr. J. P. Baker, Findlay, O.
   - *c.* "Treatment of Acute Oedema of the Larynx," Dr. Auguste Rhu, Marion, O.
   - *d.* "Herpes of the Bucal Mucous Membrane," Dr. J. E. Boylan, Cincinnati, O.

Evening Session.

1. Gymnasium Exhibition, Dr. A. T. Halstead, Cincinnati, O. This exhibition will be given in the Y. M. C. A. Gymnasium, at 7:30.

2. Papers, at 8:30.
   - *a.* "The Doctor's Hands," Dr. Dan Millikin, Hamilton, O.
   - *b.* "Music in Medicine," Dr. C. H. Merz, Sandusky, O.
   - *c.* "Medical Education," Dr. J. H. Calvin, Huron, O.
   - *d.* "The Battle with Germs," Dr. Julia W. Carpenter, Cincinnati, O.
   - *e.* "Indigestion," Dr. W. T. Barnes, Fredricksburg, O.

Thursday, May 5—Morning Session.

1. Surgical Clinics, 8:30 to 10:30 A.M., Cincinnati Hospital, Free Surgical for Women, German Hospital.

2. Papers—
   - *a.* "Meckel's Diverticulum as a Cause of Intestinal Obstruction," Dr. Dudley P. Allyn, Cleveland, O.
   - *b.* "Report of Abdominal Surgery for 1891," Dr. C. A. Kirkley, Toledo, O.
   - *c.* "A Report of Abdominal Operations," Dr. T. Dod Gilliam, Columbus, O.
   - *d.* "Aseptic Gangrene," Dr. C. B. Parker, Cleveland, O.
   - *e.* "The Radical Operation for Varicocele, with Report of Twelve Cases," Dr. B. Merrill Ricketts, Cincinnati, Ohio.
   - *f.* "Injuries of the Shoulder," Dr. F. Griswold, Sharon, O.
   - *g.* "Rupture of the Diaphragm, an Experimental Study," Dr. G. W. Crile, Cleveland, O.

Afternoon Session.

1. Report of committees.
2. Election of officers.
3. Selection of a place for the next meeting.
4. President's Address, Dr. G. A. Collamore, Toledo, O.
5. Papers:
   - *a.* "The Surgery of the Prostate," Dr. P. S. Conner, Cincinnati, O.
   - *b.* "The Treatment of Certain Forms of Club Foot," Dr. W. E. Wirt, Cleveland, O.
   - *c.* "The Infant's Prepuce," Dr. C. N. Smith, Toledo, O.
   - *d.* "External Urethrotomy for Stricture," Dr. J. A. Hobson, Flushing, O.
   - *e.* "Intubation *versus* Tracheotomy," Dr .Thomas Hubbard, Toledo, O.

f. "Appendicitis," Dr. J. A. McGlenn, Mt. Pleasant, O.
g. "A Contribution to the Operative Treatment of Chronic Catarrhal Appendicitis," Dr. R. Harvey Reed, Mansfield, O.
h. "Rupture of Uterus in Early Months of Pregnancy, with Report of Case," Dr. H. B. Gibbon, Tiffin, O.
i. "The Modern Cæsarean Section, How and When Performed." Illustrated by Drawings and Manikin, Dr. E. Gustav Zinke, Cincinnati, O.
j. "Galvanism in Fibroid Tumors of the Uterus, with Report of Cases," Dr. T. M. Wright, Troy, O.

Evening Session.
Reception at the Burnet House, 8:30.
Friday, May 6—Morning Session.
1. Surgical Clinics, 8:30 to 10:30 A.M.: Cincinnati Hospital, Free Surgical for Women, German Hospital.
2. Reports of committees.
3. Papers:
a. "Methylene Blue and Methylene Violet," Dr. Jas. T. Whittaker, Cincinnati, O.
b. "Can Scarlet Fever be Aborted?" Dr. J. C. Crossland, Zanesville, O.
c. "Forced Respiration, with Report of its Use in Nine Cases," Dr. C. R. Vanderburg, Columbus, O.
d. "Acute Rhinitis, with Retention of the Secretion," Dr. C. E. Perkins, Sandusky, O.
e. "Medical Properties of Bromo-Lithia Water," Dr. W. A. Dixon, Ripley, O.
f. "Treatment of Enteric Fever," Dr. C. L. Ward, Cridersville, O.
g. "The Rational Treatment of Typhoid Fever," Dr. F. W. Langdon, Cincinnati, O.
h. "The Pathological Anatomy of Speech Disturbances," Dr. A. B. Richardson, Cincinnati, O.
i. "Some Points in the Symptomatology of General Paresis," Dr. Philip Zenner, Cincinnati, O.
j. "Intestinal Tuberculosis," Dr. S. P. Kramer, Cincinnati, O.

Afternoon Session.
1. Reports of committees.
2. Papers:
a. "The Use of the Galvano-Cautery in Ophthalmic and Laryngeal Surgery," Dr. R. D. Gibson, Youngstown, O.
b. "The Relation of Frrors of Refraction to Chronic Diseases of the Eyelids," Dr. D. DeBeck, Cincinnati, O.
c. "Radical Cure of Hernia by the Use of the Buried Antiseptic Animal Suture, with Report of Additional Cases," Dr. F. C. Larimore, Mt. Vernon, O.
d. "Sepsis, with a Narration of a few Interesting and Instructive Cases," Dr. Robert Peter, Canal Dover, Ohio.
e. "What are the Cardinal Points in the Treatment of Chronic Catarrhal Endo-cervicitis and Endometritis?" Dr. A. F. House, Cleveland, O.
f. "Present Status of Gynecology," Dr. C. D. Palmer, Cincinnati, O.
g. "Tuberculosis of Bone," Dr. N. P. Dandridge, Cincinnati, O.
h. "Treatment of Orchitis and Epididymitis," Dr. O. Hasencamp, Toledo, O.
i. "Ichthyol in Eczema," Dr. A. Ravogli, Cincinnati, O.
j. Volunteer Papers.
3. Oral Communications.
4. New Business.
3. Unfinished and Miscellaneous Business.

The sessions will be held in the Y. M. C. A. Building, Corner Seventh and Walnut Sts.

T. V. FITZPATRICK, Sec'y.

THE following named distinguished gentlemen have been delegated to represent the British Gynecological Society at the International Congress of Gynecology and Obstetrics, next September:

Robert Barnes, Granville Bantock, Lawson Tait.

Great preparations are being made to entertain visiting physicians. His Majesty, King Leopold, will assist at the opening of the Congress. There will be a grand reception by the Belgian Gynecological Society; gala performance at the Grand Opera; also a banquet by the Belgian Gynecological Society; garden party in the gardens of the Royal Family, etc.

For all information relating to the Congress address, DR. F. HENROTIN, American Secretary, 353 La Salle Ave., Chicago, Ill.

OFFICIAL LIST OF CHANGES in the Stations and Duties of Officers Serving in the Medical Department, U. S. Army, from April 16, 1892, to April 22, 1892.

First Lieut. Ogden Rafferty, Asst. Surgeon U. S. A., is granted leave of absence for one month, to take effect on or about May 1, 1892.

First Lieut. George M. Wells, Asst. Surgeon U. S. A., is relieved from duty at San Carlos, Ariz., and ordered to report in person to the commanding officer, Ft. Grant, Ariz., for duty at that station.

By direction of the Secretary of War, Par. 13, S. O. 74, A. G. O., March 29, 1892, removing the suspension of the orders changing the stations of Capt. Aaron H. Appel and First Lieut. Julian M. Cabell, Asst. Surgeons U. S. A., is revoked.

Major John H. Janeway, Surgeon U. S. A., is relieved from the further application of so much of special orders as directs him, in addition to his other duties, to perform the duties of post surgeon at Frankford Arsenal, Penn.

Capt. Augustus A. De Loffre, Asst. Surgeon U. S. A., is granted leave of absence for fourteen days, on surgeon's certificate of disability, with authority to enter Army and Navy General Hospital, Hot Springs, Ark., for treatment.

OFFICIAL LIST OF CHANGES of Stations and Duties of Medical Officers of the U. S. Marine-Hospital Service, for the Three Weeks Ending April 16, 1892.

Surgeon P. H. Bailhache, granted leave of absence for seven days. March 29, 1892.

Surgeon George Purviance, detailed as chairman of Board for physical examination of officer, Revenue Marine Service. March 30, 1892.

Surgeon J. B. Hamilton, detailed as chairman of Board for physical examination of surfman, Life Saving Service. March 31, 1892.

Surgeon John Godfrey, detailed as inspector of immigrants, port of New York. April 14, 1892.

Surgeon F. W. Mead, detailed as chairman of Board for physical examination of officers of Revenue Marine Service. April 16, 1892.

P. A. Surgeon C. E. Banks, ordered to examination for promotion. April 14, 1892.

P. A. Surgeon D. A. Carmichael, when relieved at Port Townsend, Wash., to proceed to San Francisco Quarantine for duty. April 8, 1892.

P. A. Surgeon W. P. McIntosh, when relieved at San Francisco Quarantine, to proceed to New Orleans, La., for duty. April 8, 1892.

P. A. Surgeon W. J. Pettus, granted leave of absence for thirty days. April 12, 1892.

P. A. Surgeon G. M. Magruder, when relieved at Portland, Ore., to proceed to Port Townsend, Wash., for duty. April 8, 1892.

P. A. Surgeon J. J. Kinyoun, detailed as chairman of Board for physical examination of candidates and officers, Revenue Marine Service. March 30, 1892. Detailed as recorder of Board for physical examination of officers, Revenue Marine Service. April 16, 1892.

P. A. Surgeon G. T. Vaughan, detailed as recorder of Board for physical examination of candidates and officers, Revenue Marine Service. March 30, 1892.

Asst. Surgeon H. D. Geddings, ordered to examination for promotion. March 29, 1892.

Asst. Surgeon C. P. Wertenbaker, detailed as recorder of Board for physical examination of surfman, Life Saving Service. March 31, 1892. Ordered to examination for promotion. April 5, 1892.

Asst. Surgeon J. C. Perry, to proceed to Gulf Quarantine for temporary duty. April 9, 1892.

Asst. Surgeon G. B. Young, when relieved at St. Louis, Mo., to proceed to Portland, Ore., for duty. April 8, 1892.

Asst. Surgeon W. G. Stimpson, detailed as recorder of Board for physical examination of officer, Revenue Marine Service. March 30, 1892.

Asst. Surgeon B. W. Brown, detailed as chairman of Board for physical examination of officer, Revenue Marine Service. April 1, 1892. To proceed to Port Townsend, Wash., for temporary duty. April 8, 1892.

Asst. Surgeon M. J. Rosenau, when relieved at New Orleans, La., to proceed to St. Louis, Mo., for duty. April 8, 1892.

Asst. Surgeon L. E. Cofer, to proceed to Buffalo, N. Y., for temporary duty. April 8, 1892.

Asst. Surgeon J. M. Eager, to proceed to Gallipolis, O., for temporary duty. April 8, 1892.

Asst. Surgeon C. H. Gardner, to proceed to San Francisco, Cal., for temporary duty. April 8, 1892.